Hypoglycemic Activity of

VELLALLIPOO CHOORANAM

&

Haematinic Activity of

KAANDHA CHENDURAM

(DISSERTATION SUBJECT)

For the partial fulfillment of requirements to the Degree of

DOCTOR OF MEDICINE (SIDDHA)

(GUNAPADAM BRANCH)

GOVERNMENT SIDDHAMEDICALCOLLEGE

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(Affiliated to the TamilnaduDr.M.G.R.MedicalUniversity, Chennai)

APRIL – 2013

GOVT. SIDDHA MEDICAL COLLEGE PALAYAMKOTTAI.

DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation entitled Hypoglycemic activity of **VELLALLI POO CHOORANAM** (Nymphaea alba) And Haematinic Activity Of **KAANDHA CHENDURAM** is a bonafide and genuine research work carried out by me under the guidance of **Dr.A.Kingsly, M.D(S)**, Post Graduate Department of Gunapadam, Govt.Siddha Medical College, Palayamkottai and the dissertation has not formed the basis for the award of any Degree, Diploma, Fellowship or other similar title.

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Date: **Date:**

Place: Palayamkottai **Place:** Palayamkottai

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CONTENTS

INTRODUCTION

The siddha science is the oldest traditional treatment system generated from Dravidian culture. Siddha medicine is claimed to revitalize and rejuvenate dysfunctional organs that cause the disease and to maintain the ratio of three vital humours Vatha, Pitha and Kapha.

According to siddha medicine psycological and physiological functiions of the body are attributed to the combination of seven body constituents. First is Saaram(Nutrient), Senneer (Blood), Oon(Muscle), Fat(Kozhuppu), Enbu(Bone), Moolai (Bone Marrow) and Sukkilam, Suronitham (Semen and Ovum).

Three humours are classified as Vatha(air), Pitha(fire) and Kapha (earth and water). Concept of disease and its causes in Siddha Medicine is assumed that when the normal equilibrium of the three humours (Vatha, Pitha and Kapha) is disturbed, the disease is caused. The factors which assumed to affect this equilibrium are environment, climatic conditions, diet, physical activities and stress.

The Drugs used by siddhars are classified into three groups. Thathu (Inorganic Substance), Thavara (herbal product) and Sangamam (animal products). The drugs used in Siddha system are classified on the basis of five properties suvai (taste), guna (character), Veerya (potency), pirivu (class) and mahima (action).

The treatment in siddha medicine is aimed at keeping the three humours in equilibrium and maintenance of seven body constituents. So proper diet, medicine and a disciplined regimen of life are advised for a healthy living and to restore equilibrium of humours in diseased condition. Madhumegam is most common disease leading to more complication characterized by increased blood sugar.

Here I have brought out the efficacy of herbal drug Vellallipoo Chooranam for the treatment of madhumegam with it promising result.

AIM AND OBJECTIVES

A STUDY ON VELLALLIPOO CHOORANAM

Now - a - days the whole world is expecting very much a special and safety care without side effects from the traditional system of medicine that too from siddha system of medicine.

As a scholar of P.G gunapadam the author had many oppurtunities to study many literatures having number of medicinal preparation.

Madhumegam is most common disease leading to more complication. Megam noi is classified into 20 types. Among this madhumegam comes under Azhal type of megam. In modern aspect this can be correlated with Diabetes mellitus.

The main aim and objectives of this dissertation is to do a scientific review of **Vellallippo Chooranam** in treating **Madhumegam**.

Diabetes is the metabolic disease affecting nearly every organ system in the body.

Diabetes is a metabolic disorder characterized by increased blood sugar, resulting from defects in insulin production, insulin action or both.

Diabetes can lead to serious complication and premature death, Diabetes threatens to overwhelm developing nations as they switch to westernized life styles that emphasizes rich foods and sedentary life.

Vellalli is one of an aquatic plant. Siddhars have mentioned vellallipoo in their text effective in treating right from Mega diseases, urinary tract infection to Diabetes.

So, I have selected this disease to treat it with vellallipoo chooranam for my dissertation work.

References are found in

Gunapadam Mooligai Vaguppu [Page No - 43] regarding its anti – diabetic property.

In my dissertation work study on Vellallipoo chooranam is done in the fallowing aspect.

1. Botanical Aspect
2. Gunapadam Aspect
3. Phyto – Chemical Analysis.
4. Quantitave & Qualitative Analysis.
5. Bio – chemical Analysis
6. Pharmacological Analysis
7. Microbiological analysis.
8. Clinical Assessment.

BOTANICAL ASPECT

1) [1]BOTANICAL NAME: NYMPHAEA ALBA

CLASSIFICATION:

According to Bentham and Hooker's classification

Kingdom	:	Plant kingdom
Division	:	Flowering Plant (Magnoliophyta)
Class	:	Dicotyledons (Magnoliospida)
Subclass	:	Polypetalae
Series	:	Thalamiflorae
Order	:	Ranales
Family	:	Nymphaeaceae.
Genus	:	Nymphaea
Species	:	alba

DISTRIBUTION:

This plant is globally distributed in Europe, North Africa, Southwest Asia, India, China and Russia.

Morphological distribution:

Nymphaea alba commonly known as white water lilly in English is an aquatic herb with perennial rhizome or rootstocks anchored with mud.

Rhizome 10-50 mm thick.

Leaves:

Rounded, cordate, entire glossy floating on the surface of with long stout flexible stems.

Flowers:

White, about 5-11cm diameter solitary, floating on the surface of water at end of a long stout flexible leafless stem.

[1] Indian Medicinal Plants Volume 1 (Kritikar and Basu) Pg 230

Sepals:

4 green and brownish outside white on inner surface inserted on the base of torus.

Petals:

Many in numbers (10-20) in many series, the inner petals are transformed into stamen, all adnate to the base of disc.

Stamens:

Many, the outer one being transformed successively from petal to stamen. Anther without appendage.

Ovary:

Carpels many. The ovaries many immersed in fleshy torus and with it forming a many called ovary crowned by a large stigma with 16 rays which have cylindrical appendages.

Fruit:

A soft spongy berry, ripening under water but irregularly.

Seed:

Minute nesting in a pulp enclosed in a sac like fleshy aril.

2) [2]Anatomical Description of Flower:

Flowers solitary, large, often fragrant, regular, partially acyclic.

The perianth acyclic and the androecium acyclic. Free hypanthium absent.

Perianth with distinct calyx and corolla, or petaline (Nuphar) 5> or 20-50 (many) free. Calyx as commony interperated 4 or 5 Polysepalous, imbricate

[2] http//delta-intkley.com/angio/www/NYMPHAEA The Families of Flowering Plants (Watson and M.J. Dallwrity)

Androecium 40-80. Androecial members maturing centripetally free of the perianth, free of one another, spiraled. Androecium including staminodes (with transition from petals to stamens)

Staminodes 11-20 (in the form of nectariferous scales) external to the fertile stamens in Nuphar petaloid. Stamens 40-80: petaloid, or laminar, or filantherious. Anthers adnate, non versatile dehiscing via longitudinal slits. Intorse tetrasporangiate Endothelium developing fiberous thickenings. Anther epidermis present. The initial microspore tetrads tetrachedral o;r isobilateral. Anther wall initially with more than one middle layer pollen shed as single grain pollen grains aperturate, 1 aperturate sulcate, 2-celled.

1. Gynoecium 5-35 carpelled. The pistil 5-35 celled. Gynoecium syncarpus, superior to partly inferior. Ovary 5-35 locular
2. Placentation more or less parietal. Ovules 10-100 per locule, arillate, or non arillate, orthotropus or anatropous, bitegumient not contributing to the microphyle. Embryo – sac development polygonum – Type antipodal cells formed, not proliferating very ephemeral synergids pear shaped.
3. Endosperm formation cellular Embryogeny asterad.

3) Cultivation and Propagation:

A water plant requiring a rich soil and a sunny position in still or slowly moving waters. Best grown in 2-2.5m of water. Prefers a PH between 6 and 7. Dislike acid condition according to another report. This species is hardly to about - 20^0C. This species with horizontal roots athat often spread freely with new plants being formed at intervals along the root. These species are useful for naturalizing.

Propagation

Seed-sow as soon as it is ripe in a greenhouse pots submerged under 25mm of water. Prick out into individual pots as soon as the first true leaf appears and grow them in water in a green house for atleast 2 years before planting them out in a late spring. The seed is collected by wrapping the developing seed head in a muslin bag to avoid the seed being lost. Harvest it 10 days after it sinks below the soil surface or as soon as it reappears (200) Division in May. Each portion have atleast one eye. Submerge in pots in shallow water until established.

PHARMACOGNOSY

Nymphaea alba is large cup shaped, white flowers upto 20cm across, irth a double ruff of white petals enclosing a yellow centre. Sit like a crowns top around. Stamens are bright yellow in colour. Flowers are visited by bees, flies, beetles due to its aromatic fragrance. When flowers are dried they become less weight (more or less shrunken appearance). Taste is Astringent.

[3]PHYTOCHEMICAL ASPECT CHEMICAL CONSTITUENTS PRESENT IN FLOWER OF NYMPHAEA ALBA

Alkaloids

1) Nupharine

2) Nymphaeine

Aglycons

1. quercetin
2. kaempferol
3. I sokaempferide
4. Apigenin

Glycosides:

1. quercetin 4'β xyloside
2. 3 Methyl quercetin
3. 3βxyloside
4. quercetin 3 galactoside and 3 glucoside

Flavanoids

1) 3 glucoside of 3,5,7,3`,4`, Pentahydroxy flavone (Isoquercetin)
2) 3 galactoside of 3,5,7,3`,4`,Pentahydroxy flavone (Hyperoside)
3) 4`βxyloside of 3,5,7,3,4,Pentahydroxy flavone(4'βxyloside of quercetin)
4) 3'β xyloside of 5,7,3`,4` tetra hydroxyl 3 methoxy flavone (quercetin 4 xyloside)

Others:

- P-hydroxy benzoic acid
- P coumaric acid
- Vanillic acid.

[3] Flavanoids from the flowers of Nymphaea alba. Jercy Jambu Luto slawa.

GUNAPADAM ASPECT

1. [4]வேறு பெயர்கள் :

ஆல்பம்

குமுதம்

கைரவம்.

2. Vernacular Names :

Eng	-	The (white) Water Lilly.
Tel	-	Kalava
Mal	-	Allit – tamara
Kan	-	Nyadale huvu
Arab and pers	-	Nili far
Urd	-	Challani
Hindi	-	Kanva, Chhotta kanva
Sans	-	Kumudam.

3. [5]Vernacular Names :

Eng	-	Indian White Water Lilly.
Hindi	-	Kanva, Kokka
Kan	-	Bilenaydilic, Biletavaral
Mal	-	Ampal
San	-	Kumudam
Tam	-	Vellampal, Allitamarai
Tel	-	Allikada, Tellakaluva

[4] குணபாடம் மூலிகை வகுப்பு பக்கம் எண் 43.

[5] Indian medicinal plants vol – 4 page No 153.

4. [6]காணுமிடம் :

ஆம்பற்கொடி குள்ளான நன்னீர் நிரம்பிய குளங்குட்டைகளில் வளரும்.

"அற்ற குளத்தில் அருநீர்ப்பறவை போல்
உற்றுழித் தீர்வார் உறவல்லர் அக்குளத்தில்
கொட்டியும், ஆம்பலும், நெய்தலும் போலவே
ஒட்டியுறுவார் உறவு"

ஆம்பற்கொடி, கொட்டி, நெய்தல் முதலிய நீர்வாழ் தாவரங்களுடன் குளங்களில் வளரும்.

5. [7]வகைகள் :

வெண்மையுஞ் செம்மையுங் கலந்த நிறம் ஆகிய பூக்களையுடைய வகைகள் இதில் உண்டு. குளிர்காலத்திலும் மழைக்காலத்திலும் இது ஏராளமாய் பூக்கும்.

6. [8]வகைகள் :

ஆம்பல் வகைகளில் தமிழ்நாட்டில் வெண்ணிற மலரையுடைய வெள்ளாம்பலும், நீல நிற மலரையுடைய நீல ஆம்பலும் செந்நிற மலரையுடைய அரக்காம்பல் (செவ்வல்லி) உள்ளன. பொதுவாக ஆம்பல் என்றால் சங்க இலக்கியங்கள் வெள்ளாம்பலைக் குறிக்கின்றன. நீல ஆம்பலும் அரக்காம்பலும் வெள்ளாம்பலை பெரிதும் ஒத்தவை.

7. [9]பயன்படும் உறுப்பு :

பூ, கொடி, இலை, கிழங்கு, காய்

சுவை (Taste)	-	சிறு துவர்ப்பு (Slightly astringent)
தன்மை (Potency)	-	தட்பம் (Coolant)
பிரிவு (Bio – Transformation)	-	இனிப்பு (Sweet)

செய்கை :

வறட்சியகற்றி

[6] சங்க இலக்கிய தாவரங்கள் பக்கம் எண் 23
[7] குணப்பாடம் மூலிகை வகுப்பு பக்கம் எண் 43
[8] சங்க இலக்கிய தாவரங்கள் பக்கம் 13
[9] குணப்பாடம் மூலிகை வகுப்பு பக்கம் எண் 43

8. Pharmacological activities

1. Cardiotonic
2. Astringent
3. Demulcent
4. Anodyne
5. Aphrodisiac
6. Anti – inflammatory
7. Sedative
8. Anti – oxidant.

9. [10]வெள்ளல்லியின் பூக்குணம் :

"மேகமறும் புண்ணாறும் விட்டேகும் நீரிழிவு
தாகந் தணியும் தழலகலும் - வாகான
மெல்லியலே ஆயுள்மறை வேதிய ரெலாமுரைக்கும்
அல்லி மலரால் அறி

(அ.கு)

இதனால் மேகம், நீர்புழையின் புண், நீரிழிவு, நீர்வேட்கை, உட்சூடு ஆகிய இவைகள் விலகும்.

1. [11]Therapeutic uses :

1. White lilly is considered to be an astringent, antiseptic, anesthetic, and sedative
2. It can be used in treatment of bronchial congestion, and it can disperse the stagnated mucus from the chest.
3. The flowers can be used in treatments of insomnia and different sort of anxieties.

2. [12]Herbal medicine :

Medicinal properties of white lilly include astringent, antiseptic, sedative. Soaking the persian white lilly flower petals or leaves in wine

[10] குணபாடம் மூலிகை வகுப்பு ப.எண் - 44

[11] White Water lilly – nymphaea alba / Medicinal use. http / 1 health – from – nature, net /white lotus – water lily html.

[12] Buy white lotus Nymphaea alba http // www iamshamam.com/lotus/white lotus html

and then ingesting the extract also lent its self well as an aid in meditation and relaxation.

It has been said that powerful extracts of dried white lilly flowers were used in the first world war as an admixture to opium for surgery or even as substitute when opium was not available.

3. [13]Nymphaea alba :

The water lilly was invoked in numerous mayan magical conjugrations to heal ulcers and skin diseases.

4. [14]Nymphaea alba

Flowers and rhizomes astringent, demulcent mild sedative, spasmolytic, antiseptic, antimicrobial – used in the form of an infusion internally for chronic diarrhoea, as a douche for leucorrhoea and vaginitis, as a gargle for sore throat.

5. Nymphaea alba

Constituents : Alkaloids and glycosides.

Properties and action :

Rasa	:	Madhura, Tikta, Kashaya
Guna	:	Laghu, Pichila, Snigdha
Viriya	:	Sita
Vipaka	:	Madhura
Kanma	:	Balya, Hridya, Pittahara, Stambhama, Vatahara, Garbha sthapana, sramahara.

[13] http // www shamans garden . com/p-143 white – lotus – flowers - nymphaea - alba

[14] Nymphaea alba – logayurveda.com www.logayurveda.com/probiles / 260 nymphaea alba.

Important formulations :

Triphaladi Taila

Bala Asvagandha Lakshadi taila

Therapeutic uses : Raktadosha

Daha

Hridroga

Raktapita

Dose: 3 – 6 gm

The reason for using water as vehicle:

Now days we are using Deep spring well (bore) water or shallow spring (normal) well water for drinking purpose. As per the siddha science both of them were used for reducing heavy thirst and normalize deranged pitha humour which is the basic cause to persude diabetes in seven vital things (sabtha thathus) of human body. Also used as nutrition liquid refreshment.

[15]**கிணற்று நீர் :** (Shallow spring water)

"ஆசாரக் கூபத் தறலால் அதிதாகம்
வீசாச் சூடுபசி மெய்க்காந்தல் - மாசூலை
மெய்ப்புள் இடைத்துளைப்பு வீழ்மயக்குஞ் சோபை பித்தம்
பையவரு மீளையும் பார்"

[16]**ஊற்று நீர் :**

"ஊற்று நீர் பித்தம் ஒழிக்கும், இனிப்பாகும்
ஆற்றிவிடும் தாகத்தை அப்பொழுதே - கூற்றுவிழிக்
கொம்ப டையாய் குணங்குணங் வைத்தெளிவாய்
நம்பி யுலகறிய நாட்டு.

Meaning:

From the above classical siddha literatures both waters are reducing most of the diabetic complaints increased hunger (polyphagia)

[15] பதார்த்த குண சிந்தாமணி

[16] பதார்த்த குண சிந்தாமணி

increased thirst (polydipsia), dizziness, peripheral neuropathy and also normalize the deranged pitha humour. So, I have selected water as a vehicle.

வெள்ளல்லிப்பூ சேரும் நீரிழிவிற்கான மருந்துகள்

1. கந்தாதி இளகம்

அளவு : கொட்டை பாக்களவு

தீரும் நோய் : நீரிழிவு மூலம், கிராணி தீரும், தேக புஷ்டி உண்டாகும்.

2. நீரிழிவுக்கு மருந்து

அளவு	:	முக்கழஞ்சு
துணைமருந்து	:	பவளபற்பம்
நாள் அளவு	:	1 மண்டலம்
தீரும் நோய்	:	சகல மேகமும் தீரும்
பத்தியம்	:	கைப்பு, புளிப்பு தவிர்க்கவும்.

3. கற்பூரசிலாசத்து பற்பம்

அளவு	:	2 – 4 அரிசி எடை
தீரும் நோய்	:	மேகப்பிணிகள், மேக அழல், உட்சூடு, நீர்வேட்கை, குருதியழல் தீரும்.

4. கல்யாணக்கிருதம்

அளவு	:	1 கரண்டி, 2 வேளை
அனுபானம்	:	பசும்பால்
தீரும் நோய்	:	சோபை, உன்மாதம், காமாலை, பாண்டு, அச்சரம், உஷ்ணம், மேகநோய்கள், மூத்திரகிரச்சரசம்

1 ஆத்மரட்சாமிர்தம் என்னும் வைத்திய சார சங்கிரகம் பக்கம் எண் 457

2 ஆத்மரட்சாமிர்தம் என்னும் வைத்திய சார சங்கிரகம் பக்கம் எண் 367

3 குணப்பாடம் மூலிகை வகுப்பு பக்கம் எண் 44

4 அகத்தியர் – 2000, பக்கம் எண் 273

நீரிழிவில் காணும் பிளவைக்கான மருந்துகள்

5. பிளவை வீக்கம் பூச்சு:

பிரயோகம், பூச்சினை இலேசாக இளக்கிப் பூசவும்.

தீரும் நோய்கள்:

பிளவை வீக்கம், கட்டி

6. பெரும் பிளவைக்கு மருந்து:

அளவு : புன்னைக்காயளவு

அனுபானம் : புளித்தமோர்

தீரும்நோய் : முள்ளெலும்பின் தோன்றிய பெரும் பிளவையின எரிச்சல் நீங்கி தீரும்.

வெள்ளல்லிப்பூ சேரும் பிறநோய்க்கான மருந்துகள் கோபிக்கும் பிரமேகம்,

1. வாதப்பிரமேகத்திற்கு மருந்து

அளவு : தக்க அளவு

துணை மருந்து : தேனில் குழைத்து அருந்த கோபிக்கும் பிரமேகம் தீரும் நெல்லிக்காயின் சாற்றில் அருந்த பித்த பிரமேகம் தீரும். மோருடன் அருந்த வாதப்பிரமேகம் தீரும்.

2. பித்தத்துக்கு குமரித்தைலம்

பிரயோகம் : வெளிப்பிரயோகமாக தலைமூழ்கி வர பித்த சம்பந்தப்பட்ட பிணிகள் அனைத்தும் தீரும்.

3. பாதப்பிளப்புக்கு மருந்து:

பிரயோகம் : பொடிகளை ஒன்று சேர்த்து பாலில் அரைத்துப்பூசவும் உபயோகிக்கும் முன் காலைக்கழவும்

அகத்தியர் 2000 பக்கம் எண் 37,43

சரபேந்திரர் நீரிழிவு சிகிச்சை 107

தேரையர் வாகடம், பக்கம் எண் 117,179

4. தாம்பிராதி மாத்திரை:

பிரயோகம் : தக்க அனுபானங்களில் உரைத்து கண்ணிலிட கண்ணோய்கள் - 96 தீரும்.

5. சம்பீரத்தைலம்:

பிரயோகம் : வாரம் 1 முறை தலைமூழ்கி வர வேண்டும்

தீரும் நோய் : பித்த சம்பந்தமான பிணிகள் தீரும் மூளையின் கொதிப்பு குறையும்.

பத்தியம் : புளி தள்ளி, இச்சா பத்தியம்.

6. மகர சுதர்சனச் சூரணம்:

அளவு : ¼ தோலா, 2வேளை

அனுபானம் : வெந்நீர்

தீரும் நோய் : வாதசுரம், பித்தசுரம், கபசுரம், தொந்தசுரம், அஸ்திசுரம், இரத்தக்கெடுதல், காமாலை, பக்கசூலை

பத்தியம் : இச்சாபத்தியம்

தேரையர் குணவாகடம் பக்கம் எண் 144

சிகிச்சா ரத்ன தீபம் - 2பாகம் பக்க எண் 199

சிகிச்சாரத்ன தீபம் பக்க எண் 120

SIDDHA ASPECT OF DISEASE

[17]நீரிழிவு

வேறு பெயர்கள் :

மதுமேகம், இனிப்பு நீர்.

இயல் :

அடிக்கடி சிறு நீர் பெருவாரியாய் இழிதல், நீரிழந்த இடத்தில் ஈ, எறும்புகள் மொய்த்தல், அதனைக் காய்ச்சின் சர்க்கரை மணம் வீசல், உடல் நாளுக்கு நாள் இளைத்தல் என்னுமியல்புடைய தாம்.

நோய் வரும் வழி :

"கன்னி மயக்கத்தால் கண்டிடும் மேகமே." என நாடி நூலும், "கிரந்திப் புண்ணிரண மேகக் கீச்சக னென்னுந் துன்மார்க்கனருந்ததி யென்னும் பாஞ்சாலி யன்னையைக் கண்ணுற்றானே." என மருத்துப் பாரதமும் கூறியதால், நீரிழிவு நோய் அளவு கடந்த கலவியால் மேகத்தைத் தொடரச் செய்து வரும் நோய் எனக் கொள்ளப்படும். அன்றியும், மிகு உணவு, சோம்பித் திரிதல், மனக்கலக்கம், பொருளின் மீது மிகுந்த இச்சை என்னும் இவற்றாலும் தாய் தந்தையின் வழியாவும் வரக் கூடுமென அறிதல் வேண்டும் ஈதன்றி நெய், பால், கள் இறைச்சி, மிக்க சுவையுள்ள மீன்கள் இனிப்புச் சுவைபொருந்திய உணவுகள் என்னும் இவைகளும் நோய் வருவழிக்குக் கருவாம்.

முற் குறிகள் :

சிறு நீர், தெளிந்த நீர்போல் அடிக்கடி படிக்கணக்கில் இழிதலும், இழிந்த நீர்த்துளிகள் சற்று உலரின் பிசுபிசுத்துக் காணுதலும் உடல் வன்மை நாளுக்கு நாள் குறைந்து கொண்டே வருதலும், நாவறட்சியும் ஆகிய முற்குறிகளைக் காட்டும்.

நோயின் குறிகுணங்கள் :

மேற்கூறிய குறிகளைக் காட்டி, நீர் மிகுந்த அளவில் இறங்கும், நீருக்குக் கூறிய, நிறம், நிறை, எடை, மணம் என்னுமிவற்றுள், நிறம் தண்ணீரைப் போலும், நிறை அளவு கடந்தும், எடை கனத்தும், மணம்

[17] சித்த மருத்துவம் (பொது) ப : 509

தேன் போலும் காணப்பட்டு, காய்ச்சின் தேன் மணம் வீசுதலும் உண்டாகும். உடல் நாளக்கு நாள் மெலிவடைந்து கொண்டே வருவதுடன், தோலில் நெய்ப்பசையற்று வறண்டு சுருங்கிக் காண்பதுடன் வெளுத்த மஞ்சள் நிறத்தையுமடையும். நாவறட்சி, மிகுந்த நீர் வேட்கை, மிகுந்த பசி, புசித்த சற்று நேரத்திற்குள் பசியெடுப்பது போன்ற தோற்றம் உண்டாம். நெய், பால் முதலிய ஊட்டம் தரும் பொருள்களை உண்ணினும், உடல் ஊட்டம் பெறாமை முதலிய குறிகளை நிலைக்கச் செய்யும். இந்நோய் பெரும்பான்மையும், ஐயக்காலமாகிய முதுமையிலுண்டாம் நோயாம். சிறுபான்மை இளமையிலும் வருவதுண்டாயினும், தக்க மருத்துவத்தில் போம். நடுவயதில் உண்டாயினும் எளிதில் தீருவதுண்டு. இஃது மருத்துவத்தில் எளிதில் தீராவிடின் நோய் முதிர்ந்து தனக்குத் துணையாகப் பலவகைப் பட்ட கேடுகளையும் வருவிக்கும். சிறு நீர் அடிக்கடி மிகுந்து வெளியாவதுடன் அஃது உடல் சத்தை உருக்கிச் சர்க்கரையாய் நீர் வழியே வெளியாக்கிவிடும். மயக்கம், தலை சுற்றல், களைத்து வீழ்தல், வீசல், கண் மங்கல் அல்லது கண்ணில திரையுண்டாதல் (படலம் ஆகிய குணங்களைக் காட்டி, மிகுந்த அளவில் போய்க்கொண்டிருந்த சிறு நீரானது, நாளுக்கு நாள் அளவில் குறைந்துகொண்டே வந்து நீர்க்கட்டு நோயை உண்டாக்கி, பசியின்மை, செரியாமை, ஓக்காளம், வாந்தி, வயிற்றுநோய், மனக்கலக்கம், சினம், மயக்கம், ஆகிய குறிகளைக் காட்டிப் படுக்கையில் கிடத்தி மூச்சுத் தடுமாறி, திணரல் செய்து கொல்லும் அல்லது இருமல், இரைப்பு, (கபம்சுஷயம்), தமரக வாயு, நரம்புத்தளர்ச்சி முதலிய நோய்களைத் துணை கொண்டு கொல்லும்.

சில வேளை சொறி, சிரங்கு, கட்டி முதலியவைகளை வருவித்து துன்பம் பல காட்டும். இந்நோயில் உண்டாம் கட்டி வகைகள் தனித்துக் கூறப்பட்டுள்ளன.

குற்ற முதலிய வேறுபாடுகள் :

நோய் வருவழியில் கூறியவாறு தன் வினை பிற வினைகளின் அளவாக ஐயம் தன்னிலையில் கேடடைந்து கீழ் நோக்குக்கால்,

அத்துடன் கெட்ட, உடற்கட்டுகள் ஏழையும் ஒன்றன்பின் ஒன்றாய்க்கெடச் செய்து நாளடைவில் பசித்தீயைக் கெடுக்கும். ஊட்டம் தரும் பொருள்களை உண்ணினும், உடல் வன்மையடைதில்லை. கேடடைந்த அக்குற்றத்தால் மற்ற விரண்டும் தன்னிலை பிறழ்ந்து தங்களுக்குத் துணையாய்க் கால்களை (வாயுக்களை)யும் கூட்டி ஏழு உடற்கட்டுகளின் வன்மையைக் கெடச்செய்து பல வகைப்பட்டநோய்களையும் முதல் நோய்க்குத் துணையாக்கும். இதனைக் "குறியுடமே மேகந்தான் கொடுமை செய்து, குறைந்து வந்து வருந்தாது வெல்லாங் குன்றிப்போகும்." எனப் பதினென் சித்தர் நாடி நூலில் கூறியதால் அறிக.

MODERN ASPECT OF DISEASE

[18]Diabetes Mellitus:

Diabetes mellitus is a clinical syndrome characterised by hyperglycaemia caused by obsolute or relative deficiency of insulin.

There are 2 types:

Type -1 Insulin Dependent Diabetes Mellitus

Type -2 Non-Insulin Dependent Diabetes Mellitus.

IDDM:

Pathology:

It is a T-cell mediated autoimmune disease involving destruction of insulin secreting β cell in Pancreatic islets.

Hyperglycemia with classical symptoms occurs only when 70 - 90% destroyed.

Pathology in Pre-diabetic Pancreas:

1) Insulitis - Infiltration of Islets with mono nuclear cells containing activated macrophages, suppressor T-cells Natural killer cells.
2) Intial Patchiness then lobules containing heavily infiltrated Islets.
3) β-cells specifically of destructive process glucagon and other secreting harmone remain intact.

Detection:

1) Islet cell antibody can be detected before clinical development of Type I DM.
2) Glutamic acid Decarboxylase antibodies have a role in identifiying Type I DM in middle aged people.

   It is also associated with other autoimmune disease Thyroid, addison disease etc.

[18] Davidson principle & Practice of medicine Pg 1124

Causes:

1) **Genetic Pre-disposition:**

Genetic factors account for 1/3 of suspectibility of Type I diabetes.

Main genome is focused on HLA region with major histocompatibility complex on the short arm of chromosome 6.

Environmental factor:

1) Reduced exposure to micro – organism in early childhood limits the maturation of immune system and increase suspectability to auto immune disease.
2) Viral infection of β cell of Pancreas ex mumps, Rubella, Retroviruses, CMV.
3) **Dietary factors:**

Various nitrosamines present in smoked meats, coffee have been proposed as potentially diabatogenic toxins.

4. Bovine Serum Albumin (BSA) a major constituent of cow's milk has been early in infancy are more likely to develop Type I DM than those who are breast fed. BSA may cross neonatal get and raise antibodies which cross reat with a heat shock protein expressed β-cells.

Metabolic disturbances in Type IDM:

1) Symtoms usually seen only when 50 -70% β cells destroyed.
2) Severe insulin deficiency is associated with metabolic sequale.
3) Hyperglycemia leads to glycosuria dehydration induces secondary hyperaldosteronism.
4) Unrestrained lipolysis and proteolysis result in weight loss increased gluconeogenesis and ketogenesis.
5) Ketoacidosis occurs when generation of ketone bodies exceed the capacity of their metabolism.

Elevated H+ ions drive K+ out of the intracellular compartment. While secondary hyperaldosteronism encourage urinary loss of K+.

Thus patients usually present with a short history [typically few weeks] of hyperglycemic symptoms [thirst, polyuria, nocturia and fatigue] infection, wt loss.

Type 2 Diabetes:

Pathology:

Insulin resistance is the cause of type-2 DM.

1) Primary cause of Insulin resistance becomes unclear.
2) Intra-abdominal **"Central adipose tissue"** is metabolically active and release large quantity of FFAs which may induce insulin resistance because they compete with glucose as a fuel supply for oxidation in peripheral tissue such as muscle.
3) In addition adipose tissue release number of harmones called adipokenes which structurally resembles cytokines which is necessary for insulin sensitivity.
4) Physical activity is another importance determinant of insulin sensitivity.
5) Inactivity is associated with down regulation of insulin receptor and promote accumulation of FFAs in skeletal muscles.
6) Sedentary people are more insulin resistant than active people even with same degree of obesity.
7) Many patient with Type-2 Diabetes have evidence of fatty infiltration of liver [Non-Alcoholic fatty liver].
8) Genetic factors also play important role.
9) Type-2 Diabetes associated with overeating especially when combined with obesity and underactivity.
10) The risk of developing Type-2 DM increases 10 fold in people with BM1>30Kg1/m^2.
11) The constituents of the diet and style of eating may be important.

12) Sweet food rich in carbohydrates consumed frequently may increase the demand for insulin secretion, while high fat – food may increase FFAs and exacerbate insulin resistant.

Age:

Type-2 Diabetes is more common in middle aged and elderly.

Pregnancy:

1) During normal pregnancy insulin sensitivity is reduced through placental harmone and this affects glucose tolerance.
2) The insulin secreting cells of pancreatic islets may be unable to meet this increased demand in women genetically pre-disposed to develop diabetes.
3) Repeated pregnancy increases likelihood of developing irreversible diabetes. particularly in obese women.

Metabolic disturbances:

1) Patient with Type 2 Diabetes have slow onset of relative insulin deficiency compared to Type I.
2) Severity of classical osmotic symptoms of Polyurea and Polydypsia is related to degree of glycosuria.
3) In Type 2 DM, hyperglycemia develops slowly over months or years. There is rise in renal threshold for glucose. So glycosuria is limited.
4) Patients are aften asymptomatic and usually present with a long history of fatigue with or without symptoms.
5) In some patient with Type 2 diabetes presentation is late and pancreatic β cell failure has an advanced stage of insulin deficiency.
6) Weight loss is common, keto acidosis is uncommon.
7) Intercurrent illness, with infection increase the production of counter regulatory harmone such as cortisol, growth harmone. This increase insulin resistance, insulin deficiency, result in severe dehydradation, hyperglycemia.

Acute complication of DM:

Diabetic ketoacidosis and Hyperglycemic

Hyperosmolar state

1) Diabetic Ketoacidosis[DKA]:

Diabetic ketoacidosis was formerly considered a hallmark of Type I DM.

1. DKA result from relative or absolute insulin deficiency combined with counter regulatory harmone excess [glucagon, cortisol and growth harmone]
2. Both insulin deficiency and glucagon excess, in particular are necessary for DKA to develop.
3. Decreased ratio of insulin to glucagon promote gluconeogenesis, glycogenolysis and ketonebody formation in liver.

Precipitating events:

- Inadequate insulin administration
- Infection [UTI, sepsis, gastroenteritis]
- Drugs [cocaine]
- Pregnancy
- Infarction [cerebral, coronary]

Symptoms:

1) Nausea/vomiting
2) Thirst/polyurea
3) Abdominal pain
4) Shortness of breath

Physical findings:

1) Dehydration/Hypotension
2) Dry mucous membrane
3) Tachycardia
4) Tachypnea

5) Lethargy
6) Cerebral odema

Hyperglycemic Hyperosmolar state:

1. It is mostly seen in elderly individual with type 2 DM, with several week history of polyuria, weight loss and diminished oral intake that culminates in mental confusion, lethargy or coma.

Precipitating factor:

1) Myocardial infarction
2) Smoke
3) Sepsis
4) Pneumonia

Physical examination:

1) Dehydration
2) Hyperosmolality
3) Hypotension

Nausea, vomiting, abdominal pain and kussmaul respiration absent.

Pathophysiology:

Relative insulin deficiency and inadequate fluid intake are causes of HHS.

1) Insulin deficiency increase hepatic glucose pdn [glycogenolysis and gluconeogenesis] and impairs glucose utilisation in skeletal muscle.
2) Hypoglycemia

   Osmotic diuresis

   Intravascular volume depletion.
3) Insulin deficiency is only relative and less severe than in DKA.

Chronic complication of DM.

Micro-vascular

1) Diabetic Retinopathy
2) Diabetic Nephropathy
3) Diabetic Neuropathy

Macro-vascular:

1. Coronary artery disease
2. Peripheral vascular disease
3. Cerebro vascular disease.

Other:

1. Gastrointestinal [diarrhoea, gastropareses]
2. Genitourinary [uropathy/ sexual dysfunction]
3. Dermatology
4. Infections
5. Cataract
6. Glaucoma.

Lateral Research work on Vellallipoo Chooranam

1. Anticarcinogenic effect of nymphaea alba against oxidative damage, heperproliferative response and renal carcinogenesis in wistar rats. (khan N, sultana S) mol cell biochem, www.ncbl.nlm.nih.gov /pubmed/15881650.
2. Anxiolytic activity of nymphaea alba in mice as expiremental models of anxiety. B.S. Thippeswamy et al. www.ijp-online.com feb 01, 2011.
3. Evaluation of analgesic and antioxidant potential of ethanolic extract of Nymphae alba.

MATERIALS AND METHODS

Preparation of Drug

Collection of the Drug :

Flowers of Alli plant (Flower of Nymphaea alba) were collected during winter and spring seasons in the ponds of in and around area of veeramudiyanatham village cuddalore district. It was shown and identified by the staff of PG Gunapadam Department and Botanist.

Purification of the Raw drug :

After collection flowers were cleaned thoroughly with freshwater and floral parts were separated. Floral parts were allowed to dry completely under shade until the moisture was completely lost.

Preparation of the test drug :

The purified drug was made into powder and filtered with clean white cloth (Vasthirakayam). Then the powder was collected and preserved in an air tight container

Indication :

Madhumegam.

Route of Administration :

Enteral.

Dose :

One gram twice a day with hot water before meals. The prepared vellallipoo chooranam was used within 3 months since the self life of chooranam is 3 months. This medicine was used for the following procedures.

1. Bio – chemical analysis
2. Pharmacological analysis
3. Clinical assessment
4. Quantitative and qualitative chemical analysis.

5. Microbiological analysis
6. Biostatical analysis

PHYSICO-CHEMICAL STANDARDIZATION

The standardization parameters of Vellallipoo Chooranam (Nymphaea) was done at Sastra universityThanjavur.

The tests done are as follows.

pH at 10% of aqueous solution:

Five grams of Vellallipoo Chooranam is weighed accurately and placed in clear 100 ml beaker. Then 50 ml of distilled water is added to it and dissolved well. Wait for 30 minutes and then apply in to pH meter at standard buffer solution of 4.0, 7.0 and 9.2

Loss on drying@ 105^0 C:

Five gram of Vellallipoo Chooranam is heated in a hot oven at 1000 C to constant weight. The percentage of loss of weight was calculated as 10.35 %.

Determination of ash value:

Weighed accurately 2 grams of Vellallipoo Chooranam in tarred platinum or silica dish and incinerate at a temperature not exceeding 450^0C until free from carbon, cooled, and weighed. Calculate the percentage of ash as 3.975 with reference to the air dried drug.

Water soluble ash:

To the gooch crucible containing to the total ash, added 25 ml of water and boiled for 5 minutes. Collected the insoluble matter in a sintered glass crucible or on ash less filter paper. Wash with hot water and ignite in a crucible for 15 minutes at a temperature not exceeding 450 ^{0} C substract the weight of the insoluble matter from the weight of the ash the difference of the weight represents the water soluble ash. Calculate the percentage of water soluble ash as 305 with reference to the air dried drug.

Alkalinity as CaCO3 in water soluble ash:

Five grams of Vellallipoo Chooranam converted to ash, boiled with water filtered. Filtered was tilt rated against 0.1 N of HCl using phenophthalin as an indicator.

Alkalinity of water soluble ash = X x of acid/ 0.1 x W

X –Titre value

W - Weight of material taken

Alkalinity is given as 1.14 % of 0.1 N of HCl equated to 1 gm.

Acid in soluble ash;

Boiled the ash 5 minutes with 25 ml of dilHCl. Collect the insoluble matter in gooch crucible on an ash less filter paper wash with hot water and ignite. Cooled in a dessicator and weighed. Calculated the percentage of acid insoluble ash as 1.96% with reference to the air dried drug.

BIO – CHEMICAL ANALYSIS OF VELLALLIPOO CHOORNAM

PREPARATION OF THE EXTRACT

5gms of the drug was weighed accurately and placed in a 250ml clean beaker. Then 50ml of distilled water is added and dissolved well. Then it is boiled well for about 10 minutes. It is cooled and filtered in a 100ml volumetric flask and then it is made up to 100ml with distilled water. This fluid is taken for analysis.

QUALITATIVE ANALYSIS

S. NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	**TEST FOR CALCIUM** 2ml of the above prepared extract is taken in a clean test tube. To this add 2ml of 4 % ammonium oxalate solution	No white precipitate is formed	Absence of calcium
2.	**TEST FOR SULPHATE:** 2ml of the extract is added to 5% barium chloride solution.	No white precipitate is formed	Absence of Sulphate
3.	**TEST FOR CHLORIDE** The extract is treated with silver nitrate solution	No white precipitate is formed	Absence of chloride
4.	**TEST FOR CARBONATE** The substance is treated with concentrated Hcl	No brisk effervescence is formed	Absence of Carbonate
5.	**TEST FOR STARCH** The extract is added with weak iodine solution.	No blue colour is formed	Absence of Starch.

6.	**TEST FOR FERRIC IRON** The extract is acidified with Glacial acetic acid and Potassium ferro cyanide.	No blue colour is formed	Absence of Ferric Iron
7.	**TEST FOR FERROUS IRON** The extract is treated with concentrated Nitric acid and ammonium thiocyanate solution.	Blood red colour is formed	**Indicates the presence of Ferrous Iron.**
8.	**TEST FOR PHOSPHATE** The extract is treated with ammonium molybdate and concentrated nitric acid.	No yellow precipitate is formed	Absence of Phosphate.
9.	**TEST FOR ALBUMIN** The extract is treated with Esbach's reagent.	No yellow precipitate is formed.	Absence of Albumin
10.	**TEST FOR TANNIC ACID** The extract is treated with ferric chloride.	Blue black precipitate is formed	**Indicates the presence of tannic acid**
11.	**TEST FOR UNSATURATION** Potassium permanganate solution is added to the extract	It gets decolourised	**Indicates the presence of Unsaturated compound**.

12.	**TEST FOR THE REDUCING SUGAR** 5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.	No colour change occurs.	Absence of Reducing Sugar.
13.	**TEST FOR AMINO ACID** One or two drops of the extract is placed on a filter paper and dried it well. After drying, 1% Ninhydrin is sprayed over the same and dried it well.	Violet colour is formed	**Indicates the presence of Amino acid**
14.	**TEST FOR ZINC:** The extract is treated with potassium ferro cyanide	No white precipitate is formed	Absence of Zinc.

Inference:

The given sample **"Vellallipoo Chooranam"** indicates the presence of **Ferrous iron, Tannic acid, Unsaturated compound** and **Amino acid.**

PHARMACOLOGICAL ANALYSIS

HYPOGLYCEMIC STUDY OF VELLALLIPOO CHOORANAM

As per the "GUNAPADAM MOOLIGAI VAGUPPU" reference **Vellallipoo Chooranam** is treated for **Hypoglycemic** study in rabbits.

Reasons for choice of rabbit:

1. Can be handled easily.
2. Several number of blood samples can be taken.
3. Blood sugar regulation is more stable and more predictable than rat or mice.

AIM :

To evaluate Hypoglycemic activity of vellallipoo chooranam.

MATERIALS AND METHODS:

The test drug 100mg of Vellallipoo chooranam in 10ml of water. 2ml of test drug was given to test group.

Procedure :

Six healthy young rabbits fastened for 18 hrs weighing 1-1 ½ kg was selected Rabbits were kept in a clean condition. Before drug administration fasting blood samples were drawn from marginal ear vein of rabbits for blood sugar analysis.

Then 6 rabbits are divided into 3 groups. Each containing 2 groups. 2 rabbits received 5 ml of water and kept as a control group. The second group of rabbits received 1 mg of Dianil per 1 kg body weight and kept as a standard group. Third group of rabbits received 1gm/kg of test drug. Then the blood samples were collected at 1 ½ and 3 hrs after drug administration. During the experiment period the rabbits were fasted till the net blood sugar was estimated according to enzymatic method.

Study of Hypoglycemic effect in Rabbits using the drugs of Vellallipoo chooranam.

S.No	Name of Drugs / groups	Dose/kg of body weight	Value of fasting samples	Value of P.P samples after 1½ hrs	Reduction difference in mgs	Percentage reduction	Remarks
1	Control (water)	5 ml	72 mg	72 mgs	-	-	Significant action
2	Standard	1.25 mg	109 mg	62 mgs	47	43%	
3	Vellallipoo Chooranam	100mg	107mg	77mgs	30	28.3%	

Inference :

The test drug vellallipoo chooranam, **28.3%** reduction in blood sugar level when compared with standard drug. It shows **significant Hypoglycemic action.**

ANTI-MICROBIAL ACTIVITY OF VELLALLIPOO CHOORANAM

AIM :

To identify the **anti – microbial (Bacterial) activity of Vellalli Poo Chooranam** against streptococcus, proteus, staphylococcus, pseudomonas, E.coli.

Medium :

Muller Hinton Agar.

Components of medium:

Beef Extracts	:	300 gms / lit.
Agar	:	17 gms / lit.
Starch	:	1.50 gms / lit.
Casein Hydroxate	:	17.50 gms / lit
Distilled water	:	1000 ml
Ph	:	7.6.

Procedure :

The media was prepared from the above components and poured and dried on a petri dish. The organism was streaked on the medium and the test drug (1 gm drug in 10ml of water) was placed on the medium. This is incubated at 37^0 for one overnight and observed for the susceptibility shown up clearance around the drug.

Anti – microbial susceptibility test report.

S.No	Organism	Susceptibility	Zone of inhibition in mm
1	Streptococcus pneumoniae	Sensitive	11 mm
2	Proteus	Resistant	-
3	Staphylococcus	Sensitive	10 mm
4	Pseudomonas	Resistant	-
5	E.coli	Resistant	-

Result :

The test drug vellallipoo chooranam was sensitive for **streptococcus pneumoniae and staphylococcus aureus**.

SCANNING ELECTRON MICROSCOPIC ANALYSIS (SEM)

A scanning electron microscope (SEM) is a type of electron microscope that produces images of a sample by scanning it with a focused beam of electrons. The electrons interact with electrons in the sample, producing various signals that can be detected and that contain information about the sample's surface topography and composition.

The electron beam is generally scanned in a raster scan pattern, and the beam's position is combined with the detected signal to produce an image. SEM can achieve resolution better than 1 nanometer. Specimens can be observed in high vacuum, low vacuum and in environmental SEM specimens can be observed in wet condition.

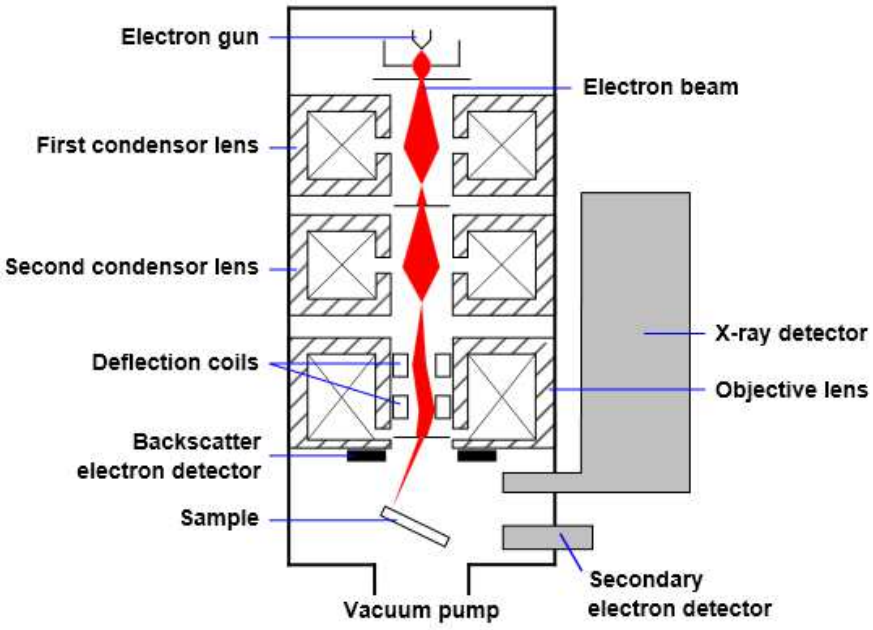
PRINCIPLE:

The types of signals produced by a SEM include secondary electrons (SE), back-scattered electrons (BSE), characteristic X-rays, light (cathodoluminescence) (CL), specimen current and transmitted electrons.

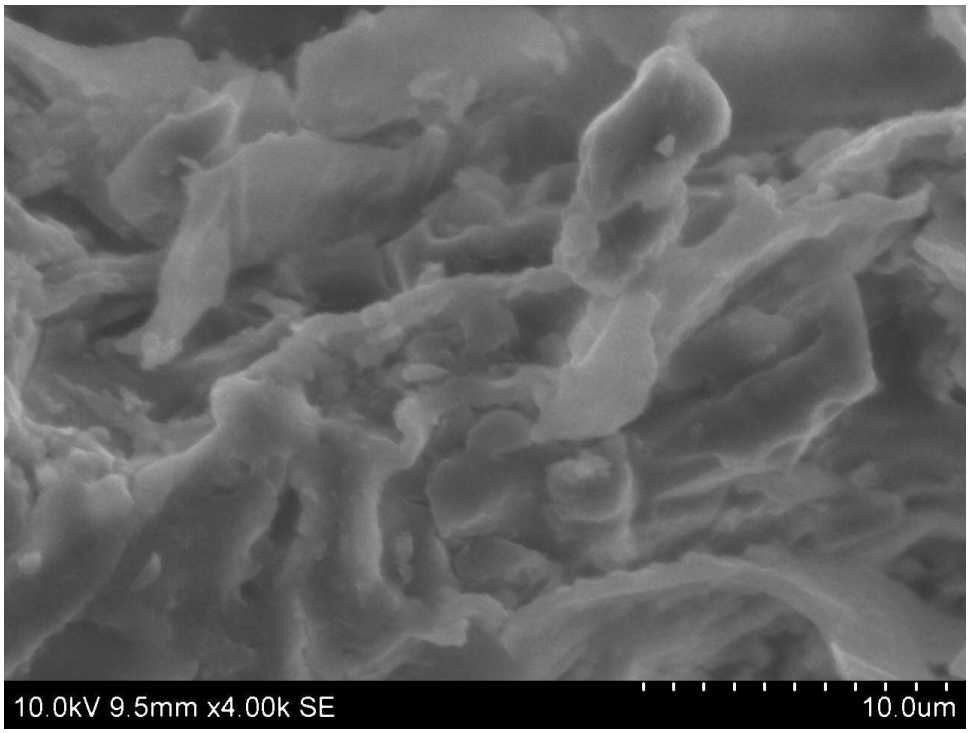
Secondary electron detectors are standard equipment in all SEMs, but it is rare that a single machine would have detectors for all possible signals. The signals result from interactions of the electron beam with atoms at or near the surface of the sample. In the most common or standard detection mode, secondary electron imaging or SEI.

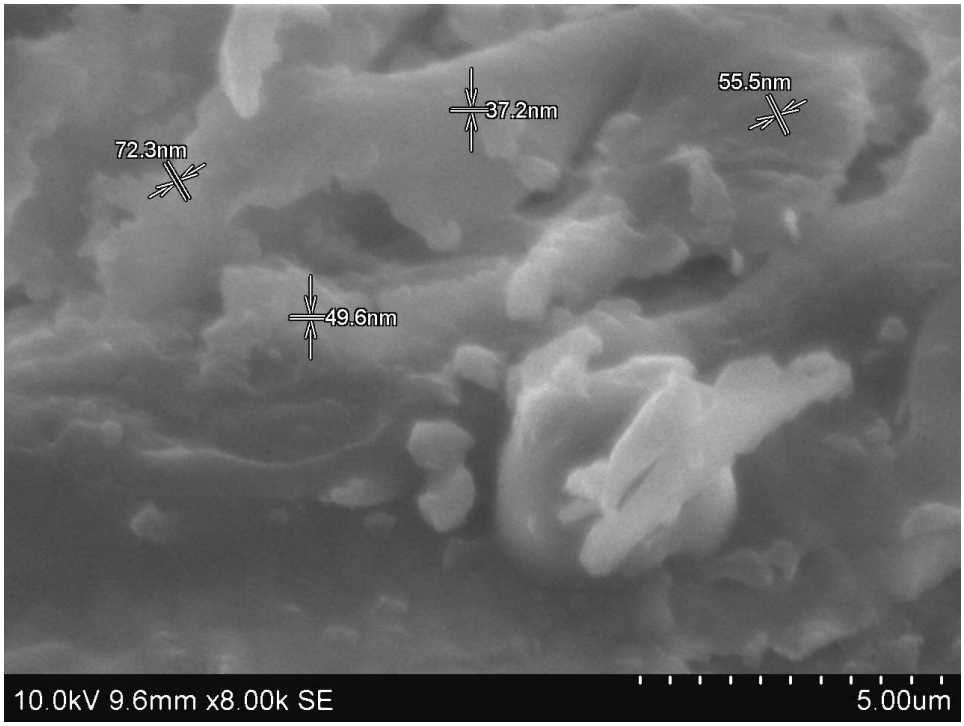
SAMPLE PREPARATION

For scanning electron microscopy (SEM), Dried herbal powder of vellali poo chooranam was fixed to aluminum stubs with double sided cellophane tape, air dried at room temperature and coated with a very thin layer of gold (JFC-1100). The specimens were examined using a scanning electron microscope (JEOL-JSM 5910), at 2000x, 5000x and 10000xmagnification.



SCANING ELECTRON MICROSCOPIC ANALYSIS OF VELLALI POO CHOORANAM

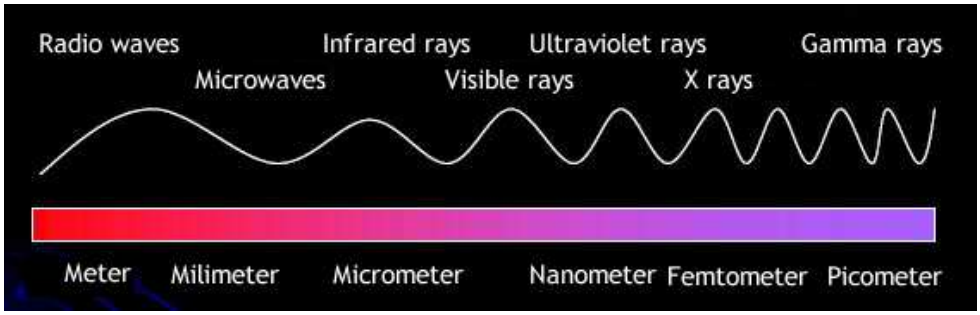




FOURIER TRANSFORM INFRARED SPECTROSCOPIC ANALYSIS

[Infrared Rays]

Infrared (IR) lights are electromagnetic radiation with thier wavelength longer than those of visible lights, measured from the nominal edge of visible red light at 0.74 micrometers, and extending conventionally to 300 micrometres. (In the visible light region, lights' color change from red to violet as their wavelength become shorter, and finally become invisible again. Then come the Ultraviolet (UV) lights whose wavelengths are longer than X-rays, ranging 10 nm to 400 nm. Rays ranging from 0.01 to 10 nanometers are classified into X-rays. Electromagnetic rays whose wavelengths are shorter than X-rays are called Gamma rays.)

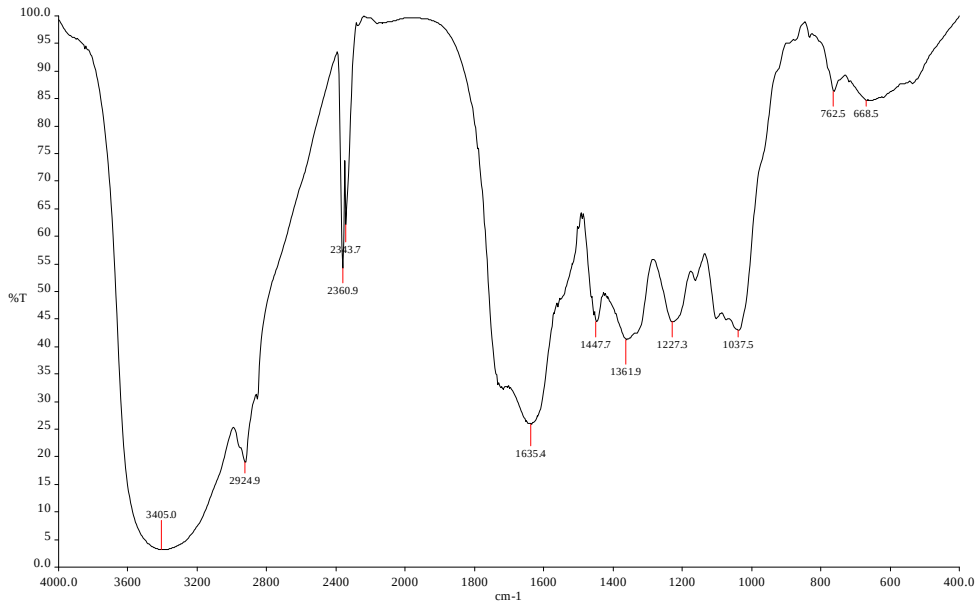


[FT-IR spectroscopy]

FT-IR Spectroscopy is the abbreviation of "Fourier Transform InfraredSpectroscopy". This is the analytical technique developed in 1970s to qualify and quantify compounds utilizing infrared absorption of molcules.

Absorption occurs when the energy of the beam of light (photons) are transferred to the molecule. The molecule gets ”excited ”and moves to a “higher” energy state. The energy transfer takes place in the form of electron ring shifts, molecular bond vibrations, rotations, and translations. IR is mostly concerned with vibrations and stretching.

FTIR analysis **Vellalli Poo Chooranam**



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PT

REF 4000 99.3 2000 99.6 600

3405.0 3.1 2924.9 18.9 2360.9 54.2 2343.7 62.1 1635.4 25.8

1447.7 44.4 1361.9 41.2 1227.3 44.5 1037.5 42.8 762.5 86.2

668.5 84.6

Infrared Absorption Frequencies	**Stretching Vibrations**	**Bending Vibrations (Functional Class)**
668.5	C–Cl stretch 850-550 cm-1 (Alkyl Halides)	C-H deformation (Alkynes)
762.5	C–H bend from 1000-650 cm-1 (Aromatic C-H Bending)	O-H bend (out-of-plane) Alcohols & Phenols
1037.5	C–O stretch (alcohols, carboxylic acids, esters, ethers)	
1227.3	C-O (Alcohols & Phenols)	
1361.9		CH2 & CH3 deformation (Alkanes)
1447.7		α-CH2 bending (Aldehydes & Ketones)

1635.4		NH2 scissoring (1°-amines) (Amines)
2343.7	Si-H silane (Silicon Function)	
2360.9	Si-H silane (Silicon Function)	
2924.9	CH3, CH2 & CH 2 or 3 bands (Alkanes)	
3405.0	N-H (1°-amines), 2 bands or N-H (2°-amines) (Amines)	

CLINICAL ASSESSMENT

DESIGN OF THE STUDY:

Open clinical trial, phase II B

A Clinical trial on **hypoglycemic activity of vellallipoo chooranam** in treating madhumegam was carried out at the Govt. Siddha medical college, Hospital – Palayamkottai. This study was carried out under the proper guidance of teaching staff of the post graduate, Gunapadam department.

40 cases with clinical signs and symptoms of madhumegam of both sexes with age ranging from 40-80 years were selected and treated.

31 cases were treated as out patients and 9 cases were treated as Inpatients.

The patients were selected as having madhumegam according to following including and excluding criterias.

Inclusion Criteria:

- Age 40 to 70 years.
- Patients willing to attend the OPD and IPD
- Polyuria
- Polydipsia
- Tiredness
- Nocturia
- Fatigue
- Recent changes in weight
- Peripheral neuritis
- Increased Blood sugar levels
    - i) Fasting more than 110 mg%
    - ii) Post prandial more than 150 mg%
- Positive family history

Exclusion Criteria :

1. Diabetes Insipidus.
2. Diabetes Ketoacidosis
3. Early onset of DM (IDDM)
4. Iatrogenic Diabetes.
5. Hyperglycemia due to other hormonal disorders like acromegaly, cushing's syndrome, hyperthyroidisiom.
6. Pancreatic carcinoma
7. Gestational diabetes.

Clinical Pathological Examinations :

Blood Test :

1. Fasting Blood sugar
2. Post Prandial blood sugar
3. Blood urea
4. Serum Cholesterol
5. WBC, TC, DC
6. ESR
7. Hb urea done

Urine analysis:

- Albumin
- Sugar : Fasting and post prandial
- Deposits

Drug :

The patients were orally administrated vellallipoo chooranam 1 gm b.d with hot water twice a day before meals.

Pattern of study:

Bio – chemical analysis of blood sugar (Fasting and Post prandial were carried out before and after treatment.

In the case of outpatient urine sugar.

- Not to take any other anti-diabetic drug of any other system whether in indigenous of modern when they are on trial.
- Incidental ailments are treated with appropriate siddha medicine.
- Advised to attend out patients department every week for the collection of medicine, urine examination and the blood sugar examination for every fifteen days.
- Advised to follow the diabetic regimen given to then or registration under this clinical trial.
- Advised to yoga therapy

Results :

In the clinical trial done for 40 patients, **77.5%** (31pts) showed **good** response**, 17.5%** (7pts) showed **fair** response and 5% (2pts) showed **poor** response.

No untoward incidents were reported by any of the patient.

Table illustrating Gender wise age distribution

Age Group (Years)	Male		Female		Total	
	No.	%	No	%	No	%
30-39	1	4.6	-	-	1	2.5
40-49	3	13.6	3	16.7	6	15.0
50-59	9	40.9	8	44.4	17	42.5
60-69	3	13.6	4	22.2	7	17.5
70-79	6	27.3	3	16.7	9	22.5
Total	22	100.0	18	100.0	40	100.00

Table illustrating Response of the drug

S.No	Response	No of Persons	Percentage
1	Good	31	77.5
2	Fair	7	17.5
3	Poor	2	5.0
	Total	40	100.0

DIABETIC DIETETIC REGIMEN

The Siddha System plays a great importance on the observation of rules regarding diet in everyday life. Because the siddha system has rightly

realized that the basic factor of the body is food.

"மருந்தே உணவு உணவே மருந்து"

As over intake or consuming unbalanced and incomplete diet is considered to be the prime causative factor for upsetting the tiridosa balance leading to manifestations of various ailments. Diet helps to achieve quick and effective control of diabetes.

- The diet should be adjusted to bring the weight of diabetics (up or down) to the optimum weight and to maintain it there.
- Obese diabetics are to be given a reducing diet, on the other hand lean and thin diabetics should receive a weight gaining diet.
- Ideal calorie 40% of the total calorie should come from carbohydrate.
- Regarding fat, is better to prescribe unsaturated fat to keep thecholesterol level under control.
- For sweeting agent patient may use sorbitol or fructose in the diet many patients require between 1800-2500 kilo calories where as aged women require a little less than this.
- The total daily intake should be avoided into three meals and two snacks. Over eating and fasting must be avoided.

Dialy diabetic diet chart: -Morning 6 Am:

Bed tea or coffee without sugar - 1 cup

Breakfast:

Toast 2 or Atta	:	60 gm
Channa	:	50gm
Boiled vegetables	:	100 gm
Tea without sugar	:	1 cup
Milk (Skimmed)	:	1 cup

Mid Morning:

Sugar less biscuits	:	2
Milk (Skimmed)	:	1 cup

Lunch:

Rice or Atta	:	70gm
Dal	:	1 cup
Channa Curry	:	100gm
Green Vegetables	:	250gm
Butter milk	:	1 cup

Evening:

Sugar less biscuits	:	2
Tea without sugar	:	1 cup

Dinner:

Atta	:	70gm
Green Vegetables	:	250gm
Channa Curry	:	50gm

Advice :

- To take tea or coffee without sugar.
- Breakfast - wheat preparations.
- Lunch - Rice preparations.
- Dinner - Kelvaragu Preparations.
- Direct sugar intake in the form of refined carhohydrates should totally be avoided. This includes table sugar, sweet, honey and jaggery.
- To omit sweet vegetables and most of the underground vegetables.
- The total quantity of food must be restricted.
- Green leafy vegetables and other low calorie food can be taken in unlimited quantities.

- Addition of vegetables protein in the form of Bengal gram, green gram.
- Daily regular exercise like walking.

உணவில் சேர்க்க வேண்டிய காய்கறிகள்:

கசப்பு, துவர்ப்பு சுவையுள்ள காய்கறிகள் நல்லது.

பாகல் பிஞ்சு, புடலங்காய், வெண்டக்காய், சௌசௌ, காலிபிளவர், கத்திரி, வாழைத்தண்டு, வெள்ளரிக்காய், சுண்டைவற்றல் இவற்றை சேர்த்துக் கொள்ளவும்.

உணவில் சேர்க்க வேண்டிய கீரை வகைகள்:

பொதுவாக எல்லா கீரை வகைகளையும் சேர்த்துக் கொள்ளவும். உணவில் சிறிய அளவில் வெங்காயம், மஞ்சள், பூண்டு, கடுகு, ஏலம், வெந்தயம், சீரகம், வாழைப்பூ, கறிவேப்பிலை, மல்லி, காயம் இவைகளை சேர்க்க வேண்டும். காய்கறிகளை குறைந்த அளவு எண்ணெயில் வேக வைக்க வேண்டும்.

Help of excricise in Mahumegam:

- Lowers the blood glucose level quickly
- Improves the body's ability to use insulin
- Reduces insulin requirement
- Reduces the risk of heart diseases.

Yoga and Diabetes:

சூரிய நமஸ்காரம் : (Sun salutation)

Sun salutation is very good exercise for people suffering from diabetes. It increases the blood supply to various parts of body, improving insulin administration in the body. It gives all the benefits of exercise if practised at 4 rounds per minute. \

Asanas:

- Dhanurasana
- Ardhamatsyendrasana
- Vajarasanayogamudra
- Pavan muktasana
- Sarvangasana
- Halasana
- Matsyasana

These asanas have positive effect on pancreas and also insulin functioning. **Pranayama:**

Pranayama is Nadi Shodhan pranayama or alternate nostril breathing, this type is found useful in diabetes as alternate nostrlis breathing has calming effect on nervous system, which reduces stress levels, helping in diabetes treatment.

Meditation:

Practice of meditation is especially useful in management of stress. Especially for diabetes, concentration on pancreas during the meditation practice has shown positive effects on sugar levels.

BIOSTATISTICAL ANALYSIS

VELLALLI POO CHOORANAM

The clinical trials were described according to their demographic profiles such as age and sex in terms of percentage. They were compared and contrasted according to their age between the gender by unpaired students't' test. The effectiveness of drug Vellalli Poo Chooranam was proved in controlling the fasting and post prandial by student's paired `t' test The above statistical procedures'. Were performed by the S.P.S.S. Statistical package. The p- values < 0.05 were considered as significant.

Results:

Description of study subjects:

The study subjects of the madhumegam diagnosis were described according to their sex wise age distribution. They were compared in respect of theire age between the gender.

Table 1 gender wise age distribution

Age	Male		Female		Total	
Group (Years)	No.	%	No.	%	No.	%
30-39	1	4.6	-	-	1	2.5
40-49	3	13.6	3	16.7	6	15.0
50-59	9	40.9	8	44.4	17	42.5
60-69	3	13.6	4	22.2	7	17.5
70-79	6	27.3	3	16.7	9	22.5
Total	22	100.0	18	100.0	40	100.0

The gender wise age distribution was shown in the above table 1. The males participation was 22 (55%) trials and females participation was 18 (45%) trials.

Table 2 : Comparison between sexes according to their age

Sex	Age (Years)		Difference of means	't'	d.f	Significance
	Mean	S.D				
Males	58.0	12.3	0.6	0.162	38	P>0.05
Femals	57.4	9.1				

The above table 2 compares the study subjects in respect of the age between the sexes.

The mean age the male was 58.0 ± 12.3 years and the mean ages of females were 57.4 ± 9.1 years. The difference between the mean ages was 0.6 years and the same was not statistically significant (P>0.05)

Assessment of fasting and postprandial blood sugar before and after treatment:

The blood sugar level of the subjects was assessed before and after treatment of both occasions.

Table 3: The Blood sugar level of fasting and postprandial before and after treatment

Blood Sugar level(mg/dl)	Fasting				Postprandial			
	Before		After		Before		After	
	No	%	No	%	No	%	No	%
70-110	5	12.5	33	82.5	-	-	-	-
110-140	12	30.0	7	17.5	-	-	21	52.5
140 and above	23	57.5	-	-	40	100.0	19	47.5
Total	40	100.0	40	100.0	40	100.0	40	100.0

The table -3 states the assessment of the blood sugar level before and after treatment. The fasting sugar was normal in 5 (12.5%) persons. Before treatment and after treatment the same was increased to 33

(82.5%). No person's blood sugar was normal before treatment and the same was increased to 21 (52.5%) of persons after treatment.

Table 4: Effectiveness of the drug in the management of blood sugar

Variables	Before		After		Differences		`t'	d.f	Significance
	Mean	S.D	Mean	S.D	Mean	S.D			
Fasting Sugar	146.4	27.4	88.0	17.2	58.4	24.0	15.353	39	P<0.001
P.P Sugar	246.8	46.4	148.1	33.7	98.8	44.1	14.157	39	P<0.001
Weight(kg)	67.2	5.8	67.3	5.6	0.1	0.7	0.650	39	P>0.05

The table 4 states the effectiveness of the drugs by means of fasting, postprandial sugar level and improvement of the weight. The mean fasting blood sugar was 146.4 ± 27.4 and same was reduced to 88.0 ± 17.2 mg / dl with a reduction of 58.4 ± 24.0 mg/dl. Similarly the post prandial sugar level was reduced from 246.8 ± 46.4 mg/dl after treatment 148.1 ± 33.7 with the mean reduction of 98.8 ± 44.1. The above reductions were statistically very highly significant (p<0.001). But there was no significant improvement was observed between the before and after treatment in respect of their weight.

Response of the drug

The response of drug was graded as good, fair and poorly considering the effectiveness of the drug in related variables.

Table 5: Response of the drug

S.No	Response	No.of Persons	Percentage
1	Good	31	77.5
2	Fair	7	17.5
3	Poor	2	5.0
	Total	40	100.0

The above table 5 graded to the response of the drug as good 31 (77.5%) patients. The remaining were graded as fact and poor as 7 (17.5%) and 2 (5.0) respectively.

Discussion

The male and female participation of the study were 55% and 45% respectively. But there was no significant difference was observed statistically between the age of male and females ($p>0.05$)

The fasting sugar was controlled after undergoing the treatment from 12.5% to 82.5% and the post prandial sugar was controlled from 10 persons to 21 (52.5%) persons. This sugar level controlled was attributed to effectiveness of the drug.

The Mean fasting sugar was 146.4 ± 127.4 mg/dl and the same was reduced to 88 ± 17.2 and the reduction of 58.4 ± 24.0 mg/dl was statistically very significant ($p<0.001$) similarly the P.P sugar was also reduced statistically very **highly significant (P<0.001)** their was no significant weight gain between before and after treatment. ($P<0.05$) The response of the drug in controlling the blood sugar was **77.5%** good, **17.5%** fair and **5%** only poor.

RESULTS & DISCUSSION

1. "தன்வினை பிறவினை தாழினும் மிகினும்
உடலைப் பிணிக்கு முன்மையிது தாமே"

கையெழுத்துப் பிரதி சித்த மருத்துவ நோய் நாடல்

According to the above verse, disease occurs due to imbalance of extrinsic and intrinisce factors. The imbalance of the three humours occur due to either excessive or decreased intake of food, working beyond one's physical limit or living sedentary life.

The causative factor for the occurrence of Madhumegam is pitha which lead to derangement of abana vayu and seven udal thathus.

2. "பித்த மதிகரிப்பின் பேசும் பரிகாரம்
சுத்தத் துவரோடு சொல்லினிப்புச் - சத்தாகும்
கைப்புச் சுவையே கருதுவதன் வீறு"

(கண்ணுசாமியம்) நோய்நாடல் நோய் முதல் நாடல் திரட்டு
பாகம் - 1, பக்கம் எண் - 24

According to the above verse, to neutralize the vitiated pitha humour, medicine having Astringent, sweet, bitter, taste can be given. Thus vellallipoo chooranam having Astringent taste can be given to neutralize pitha humour.

துவர்ப்பின் இயல்பு :

3. கட்டுவது சற்றுக் கரகரப்பாக்குவது
திட்டமாய் தோற்பதனஞ் செய்வது - மட்டிற்
கொழுப்பு நீர் மல்குங் கொழுப்பும் வரட்டல்
தொழிலாந் துவர்ப்புச் சுவைக்கு

(ம.த.பா)
சித்த மருத்துவாங்கச் சுருக்கம் பக்கம் எண் - 40

பொருள் :

கட்டுக்கடங்காமல் வெளியாகும் மலம், நீர் முதலியவைகளை கட்டி மட்டுப்படுத்துவதும், தோலைப் பதமாக்குவது, பொருள்களின் இசிவுத்தன்மை, நெய்ப்புத்தன்மை நீக்குவது, மிகுப்பெருகுகின்ற

நிணநீரையும் நிணத்தையும் வறளச் செய்வது துவர்ப்புச் சுவைக்குண்டான தொழில்.

துவர்ப்பின் செய்கை :

"குருதி சுத்தி யாக்கும்
கொடிய பித்தம் போக்கும்
பொருத்துப் புண்ணை யாற்றும்
பொல்லா வையம் மாற்றும்
மருவு மந்தம் தேக்கும்
வளர்க்கு மாமம் யார்க்கும்
குருவின் குணத்த தாலே
குளிர்ந்த துவர்ப்பின் வேலை"

(ம.த.பா)

சித்த மருத்துவாங்கச் சுருக்கம் பக்கம் எண் - 40

பொருள் :

இரத்தத்தைச் சுத்தியடையச் செய்யும். பித்தம் கெட்டிருந்து மிக்க துன்பம் விளைவிப்பதனால் அதைப் போக்கும். இன்னல் தரும் இரணங்களைப் போக்கும கபதோடத்தைப் போக்கும்.

According to the above two verses, **Astringent taste** neutralizes the **pitha humour** (பித்தத்தை போக்கும்) which is the cause of **madhumegam.** It also regulates excessive urination (polyurea) (கட்டுகடங்காமல் போகும் நீர் மட்டுபடுத்தும்) purifies the blood, (இரத்ததைத் சுத்தி செய்யும்), controls ketosis resulting from a marked increase in free fatty acid release from adipocytes, with a resulting shift towards ketone body synthesis in the liver (மிகப் பெருகுகின்ற நிணத்தையும் நிணநீரையும் வறளச் செய்யும்) The most common skin manifestation of DM are protracted wound healing and skin ulceration (இன்னல் தரும் இரணங்களைப் போக்கும்).

According to potency **(துட்பம் - coolant**) also intensify the **pitha humour** and **Biotransformation** is also sweet which neutralize the **pitha humour Astringent taste neutralize the kaba humour which will be**

increased later . In that way, I have selected "**Vellallipoo Chooranam**" to test its efficacy in treating **mahumegam**.

According to **physico – chemical analysis** acid insoluble ash is only **(1.12%)** indicates that trial drug will **digest completely** in human Gastro intestinal tract.

According to **Biochemical analysis** presence of **Ferrous Iron** improves the hematological level in most of the patients; Iron is associated with **effective immune competence** of the body. The presence of Amino acids are useful for energy purpose, one of the nutrients that evokes insulin. Amino acids will **promote the immune** system. In the body Amino acids are responsible for the tissue repair and body building. The presence of **tannic acid** have **anti diabetic** property (Javan mardi Jet al).

According to **pharmacological analysis**, the study of **vellallipoo chooranam** has got **significant** anti – diabetic activity.

Microbiological analysis of vellallipoo chooranam shows sensitivity for **staphylococcus aurceus** and **streptococcus pneumoniae**.

According to **Scanning Electron Microscopic** result in the picture of **vellallipoo chooranam** particles size in noted in **nanometer**. The average value of particle size is 53.6nm since the trial drug consists of particles in nano size, then we came to know that the trial drug has finished perfectly and able to produce **good therapeutic value**.

In Fourier Transform infrared spectroscopy, it showed the presence of functional groups related to **vellallipoo chooranam**.

For clinical trial cases 40 cases were selected, out of this 33 patients were treated as outpatients and 7 cases as inpatients in clinical evaluation the response of the drug in controlling the blood sugar was **77.5% good**, **17.5 fair** and only **5% poor**.

No untoward incidents were reported by any of the patients.

According to **Biostastical analysis**, the mean fasting sugar was reduced to **88 ± 17.2** and the reduction of **58.4 ± 24.0mg**/ dl was stastically very significant (P<0.001) similarly the post prandial sugar was also reduced stastically **highly significant** (P<0.001)

SUMMARY

The test drug "**Vellallipoo Chooranam**" was selected for the study to establish its efficacy in treating "**Madhumegam**"

Reference were found in **Gunapadam Mooligai Vaguppu** - Page No – 43

The dose of drug is 1gm b.d daily with lukewarm water before meals.

In the **review of literature** section, Gunapadam **Botanical** aspects and **Phytochemical aspects lateral Research work of** trial drug **Siddha** and **Modern** aspects of Madhumegam are being discussed and updates from internet have also been added.

The **Physicochemical analysis** indicates the presence of very **low acid insoluble ash.**

The **bio-chemical** analysis indicates the presence of **Ferrous Iron, Amino acid** and **Tannic acid.**

Pharmacological analysis shows that this drug has **significant Antidiabetic activity microbiological** analysis shows that this drug was sensitive of **Staphylococcus aureus** and **streptococcus pneumoniae.**

Scanning Electron Microscopic study reveals the presence of particles as **nanoparticles** and it shows trial drug has finished perfectly.

Fourier Transform infrared Spectroscopy study reveals the presence of **functional group** related to **Vellallipoo Chooranam.**

Clinical evaluation of this drug shows **good** response **(77.5%)** of patients, **fair** to response **(17.5%)** of patients and **5%** showed **poor** response.

Bio – stastical analysis also proved that this drug has got **highly significant effect** in treating **madhumegam.**

No adverse reactions were noted during the treatment.

CONCLUSION

It has been concluded that **Vellallipoo Chooranam** is **effective** in treating **madhumegam** without causing any adverse effects.

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Elangumani	**Age/Sex : 75/M**	**O.P.No. : 40566**	**From : 31/05/2012**	**To : 25/06/2012**	**No.of Days treated : 25 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 120/80mmhg			**B.P. : 120/80mmhg**		
Excessive intake of food, excessive thirst,excessive urination and tiredness present since 2 years	**Blood :** Blood sugar Fasting – 130 mgs% Post prandial – 280 mgs% Serum cholesterol - 120mgs% Blood Urea - 22 mgs% Hb A_1 C - 8	TC – 8100 cells/cumm DC - P – 68% L – 30% E – 2% ESR ½ hr – 5 mm 1 hr - 10 mm Hb – 79%	**Urine :** Alb - Nil Sugar F - Nil PP – ++ Dep -NAD	**Blood :** Blood sugar Fasting - 82 mgs% Post prandial - 140 mg% Serum cholesterol - 120mgs% Blood Urea - 20 mgs% Hb A_1C - 7	TC - 8200 cells/cumm DC - P – 70% L – 28% E – 2% ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 82%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	++	++	+	-	-	-	-	-	-	-

Name : Pechimuthu	**Age/Sex : 54/M**	**O.P.No. : 42098**	**From : 06/05/2012**	**To : 19/07/2012**	**No.of Days treated : 78 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 130/80mmhg			**B.P. : 130/80mmhg**		
Excessive intake of food, excessive urination, excessive thirst and tiredness present since 3 years	**Blood :** Blood sugar Fasting – 130 mgs% Post prandial – 223 mgs% Serum cholesterol - 202mgs% Blood Urea - 18 mgs% Hb A_1 C - 7	TC – 9200 cells/cumm DC - P – 56% L – 40% E – 4% ESR ½ hr – 8 mm 1 hr - 20 mm Hb – 72%	**Urine :** Alb - Nil Sugar F - Nil PP – ++ Dep -NAD	**Blood :** Blood sugar Fasting - 120 mgs% Post prandial - 200 mg% Serum cholesterol - 190mgs% Blood Urea - 19 mgs% Hb A_1C - 6	TC - 9200 cells/cumm DC - P – 60% L – 36% E – 4% ESR ½ hr - 6 mm 1 hr - 12 mm Hb – 72%	**Urine :** Alb - Nil Sugar F - Nil PP - +++ Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	++	++	+	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : S. Swamy	**Age/Sex : 48/M**	**O.P.No. : 42143**	**From : 06/05/2012**	**To : 11/06/2012**	**No.of Days treated : 31 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 130/80mmhg			**B.P. : 130/80mmhg**		
Excessive intake of food, excessive thirst,excessive urination and tiredness present since 4 years	**Blood :** Blood sugar Fasting – 150 mgs% Post prandial – 220 mgs% Serum cholesterol - 233mgs% Blood Urea - 27 mgs% Hb A_1 C - 8	TC – 7800 cells/cumm DC - P – 62% L – 28% E – 10% ESR ½ hr – 3 mm 1 hr - 6 mm Hb – 76%	**Urine :** Alb - Nil Sugar F - Nil PP – ++ Dep – 1-2 puscells	**Blood :** Blood sugar Fasting - 140 mgs% Post prandial - 170 mg% Serum cholesterol - 200mgs% Blood Urea - 25 mgs% Hb A_1C - 6	TC - 8000 cells/cumm DC - P – 62% L – 32% E – 6% ESR ½ hr - 3mm 1 hr - 4mm Hb – 80%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Poor

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	++	++	+	-	-	+	-	-	-	-

Name : Subramanian	**Age/Sex : 55/M**	**O.P.No. : 44151**	**From : 13/06/2012**	**To : 21/07/2012**	**No.of Days treated : 38 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 120/80mmhg			**B.P. : 120/80mmhg**		
Excessive intake of food, excessive Thirst, excessive urination and tiredness present since 1 year	**Blood :** Blood sugar Fasting – 140 mgs% Post prandial – 211 mgs% Serum cholesterol - 154mgs% Blood Urea - 18 mgs% Hb A_1 C - 8	TC -10000 cells/cumm DC - P – 60% L – 30% E – 10% ESR ½ hr – 5 mm 1 hr - 10 mm Hb – 76%	**Urine :** Alb - Nil Sugar F - - PP – - Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 160 mg% Serum cholesterol - 160mgs% Blood Urea - 20 mgs% Hb A_1C - 6	TC - 9000 cells/cumm DC - P – 60% L – 34% E – 6% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Madasamy	**Age/Sex : 56/M**	**O.P.No. : 45296**	**From : 18/06/2012**	**To : 25/07/2012**	**No.of Days treated : 37 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 130/80mmhg			**B.P. : 130/80mmhg**		
Excessive intake of food, excessive urination, itching present in medial side of tibial region since 2 years	**Blood :** Blood sugar Fasting – 140 mgs% Post prandial – 200 mgs% Serum cholesterol - 250mgs% Blood Urea - 24 mgs% Hb A_1 C - 8	TC – 9000 cells/cumm DC - P – 60% L – 36% E – 4% ESR ½ hr – 4 mm 1 hr - 8 mm Hb – 72%	**Urine :** Alb - Nil Sugar F - + PP – ++ Dep -NAD	**Blood :** Blood sugar Fasting - 90 mgs% Post prandial - 117 mg% Serum cholesterol - 220mgs% Blood Urea - 23 mgs% Hb A_1C - 7	TC - 9100 cells/cumm DC - P – 70% L – 28% E – 2% ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 82%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	++	++	+	-	-	-	-	-	-	-

Name : Vadivelmurugan	**Age/Sex : 46/M**	**O.P.No. : 45267**	**From : 18/06/2012**	**To : 25/07/2012**	**No.of Days treated : 37 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 120/70mmhg			**B.P. : 120/70mmhg**		
Excessive intake of food, excessive thirst, excessive urination and tiredness present since 4 years	**Blood :** Blood sugar Fasting – 150 mgs% Post prandial – 210mgs% Serum cholesterol - 116mgs% Blood Urea - 19 mgs% Hb A_1 C - 7	TC – 9700 cells/cumm DC - P – 67% L – 30% E – 3% ESR ½ hr – 3 mm 1 hr - 9 mm Hb – 74%	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 78 mgs% Post prandial - 170 mg% Serum cholesterol - 115mgs% Blood Urea - 20 mgs% Hb A_1C - 6	TC - 9800 cells/cumm DC - P – 70% L – 25% E – 5% ESR ½ hr - 3 mm 1 hr - 5 mm Hb – 75%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Malaiappan	**Age/Sex : 60/M**	**O.P.No. : 48047**	**From : 27/06/2012**	**To : 01/08/2012**	**No.of Days treated : 35 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Polyphagia, polyuria, tiredness and numbness present in both feet since 5 months.	**Before treatment**			**After treatment**		
	B.P. : 130/70mmhg			**B.P. : 130/70mmhg**		
	Blood : Blood sugar Fasting – 130 mgs% Post prandial – 210 mgs% Serum cholesterol - 130mgs% Blood Urea - 16 mgs% Hb A_1 C - 8	TC – 7600 cells/cumm DC - P – 64% L – 32% E – 4% ESR ½ hr – 4 mm 1 hr - 8 mm Hb – 79%	**Urine :** Alb - Nil Sugar F - Nil PP – ++ Dep -NAD	**Blood :** Blood sugar Fasting - 120 mgs% Post prandial - 190 mg% Serum cholesterol - 102mgs% Blood Urea - 20 mgs% Hb A_1C - 7	TC - 7600 cells/cumm DC - P – 66% L – 36% E – 2% ESR ½ hr - 3 mm 1 hr - 5 mm Hb – 80%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Poor

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	++	++	+	-	-	-	-	-	-	-

Name : Guruvammal	**Age/Sex : 56/F**	**O.P.No. : 50151**	**From : 04/07/2012**	**To : 08/08/2012**	**No.of Days treated : 34 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive intake of food, ecessive urination and tiredness present since 1 year.	**Before treatment**			**After treatment**		
	B.P. : 130/80mmhg			**B.P. : 130/80mmhg**		
	Blood : Blood sugar Fasting – 140 mgs% Post prandial – 228mgs% Serum cholesterol - 126mgs% Blood Urea - 26 mgs% Hb A_1 C - 7	TC – 8700 cells/cumm DC - P – 60% L – 38% E – 2% ESR ½ hr – 4 mm 1 hr - 10 mm Hb – 65%	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 118 mgs% Post prandial - 200 mg% Serum cholesterol - 190mgs% Blood Urea - 20 mgs% Hb A_1C - 6	TC - 9000 cells/cumm DC - P – 62% L – 36% E – 2% ESR ½ hr - 4 mm 1 hr - 8 mm Hb – 67%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Fair

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Murugan	**Age/Sex : 38/M**	**O.P.No. : 58486**	**From : 01/08/2012**	**To : 05/09/2012**	**No.of Days treated : 34 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 120/80mmhg			**B.P. : 120/80mmhg**		
Excessive intake of food, excessive urination and tiredness present since 8 months.	**Blood :** Blood sugar Fasting – 110 mgs% Post prandial – 201 mgs% Serum cholesterol - 190mgs% Blood Urea - 28 mgs% Hb A_1 C - 7	TC – 8800 cells/cumm DC - P – 60% L – 39% E – 1% ESR ½ hr – 4 mm 1 hr - 8 mm Hb – 69%	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 80 mgs% Post prandial - 180 mg% Serum cholesterol - 200mgs% Blood Urea - 25 mgs% Hb A_1C - 7	TC - 9000 cells/cumm DC - P – 62% L – 36% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 70%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Fair

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Name : Thirumal	**Age/Sex : 67/M**	**O.P.No. : 60640**	**From : 08/07/2012**	**To : 12/08/2012**	**No.of Days treated : 34 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 130/90mmhg			**B.P. : 130/90mmhg**		
Polyphagia, polyuria and tiredness present since 1 year.	**Blood :** Blood sugar Fasting – 149 mgs% Post prandial – 180mgs% Serum cholesterol - 200mgs% Blood Urea - 23 mgs% Hb A_1 C -	TC – 9600 cells/cumm DC - P – 54% L – 43% E – 4% ESR ½ hr – 12 mm 1 hr - 78 mm Hb – 61%	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 70 mgs% Post prandial - 110 mg% Serum cholesterol - 200mgs% Blood Urea - 22 mgs% Hb A_1C - 6	TC - 9500 cells/cumm DC - P – 62% L – 36% E – 2% ESR ½ hr - 4 mm 1 hr - 10 mm Hb – 65%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Manoharan	**Age/Sex : 50/M**	**O.P.No. : 60641**	**From : 08/07/2012**	**To : 12/09/2012**	**No.of Days treated : 64 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive apetite, excessive urination and tiredness present since 3 years	**Before treatment**			**After treatment**		
	B.P. : 130/80mmhg			**B.P. : 130/80mmhg**		
	Blood : Blood sugar Fasting – 90 mgs% Post prandial – 180 mgs% Serum cholesterol - 250mgs% Blood Urea - 23 mgs% Hb A_1 C - 8	TC – 7000 cells/cumm DC - P – 60% L – 38% E – 2% ESR ½ hr – 7 mm 1 hr - 15 mm Hb – 70%	**Urine :** Alb - Nil Sugar F - Nil PP – ++ Dep -NAD	**Blood :** Blood sugar Fasting - 82 mgs% Post prandial - 140 mg% Serum cholesterol - 150mgs% Blood Urea - 20 mgs% Hb A_1C - 7	TC - 7200 cells/cumm DC - P – 65% L – 35% E – 2% ESR ½ hr - 4 mm 1 hr - 8 mm Hb – 71%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	++	++	+	+	-	-	-	-	-	-

Name : Irudhayaraj	**Age/Sex : 61/M**	**O.P.No. : 68078**	**From : 03/07/2012**	**To : 10/10/2012**	**No.of Days treated : 36 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive intake of food, excessive urination and excessive thirst present since 5 years.	**Before treatment**			**After treatment**		
	B.P. : 130/90mmhg			**B.P. : 130/90mmhg**		
	Blood : Blood sugar Fasting – 120 mgs% Post prandial – 210mgs% Serum cholesterol - 191mgs% Blood Urea - 38 mgs% Hb A_1 C - 8	TC – 8500 cells/cumm DC - P – 58% L – 38% E – 4% ESR ½ hr – 9 mm 1 hr - 18 mm Hb – 68%	**Urine :** Alb - Nil Sugar F - Nil PP – ++ Dep -NAD	**Blood :** Blood sugar Fasting - 70 mgs% Post prandial - 130 mg% Serum cholesterol - 180mgs% Blood Urea - 25 mgs% Hb A_1C - 6	TC - 8600 cells/cumm DC - P – 60% L – 38% E – 2% ESR ½ hr - 4 mm 1 hr - 8 mm Hb – 72%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	++	++	+	+	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Mallika	**Age/Sex : 45/F**	**O.P.No. : 68833**	**From : 05/09/2012**	**To : 10/10/2012**	**No.of Days treated : 35 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 120/80mmhg			**B.P. : 120/80mmhg**		
Excessive apetite, excessive urination, excessive thirst present since 2 years.	**Blood :** Blood sugar Fasting – 120 mgs% Post prandial – 260 mgs% Serum cholesterol - 210mgs% Blood Urea - 24 mgs% Hb A_1 C -	TC – 9200 cells/cumm DC - P – 60% L – 30% E – 10% ESR ½ hr – 16 mm 1 hr - 24 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP – ++ Dep -NAD	**Blood :** Blood sugar Fasting - 90 mgs% Post prandial - 150 mg% Serum cholesterol - 205mgs% Blood Urea - 22 mgs% Hb A_1C -	TC - 9200 cells/cumm DC - P – 62% L – 36% E – 2% ESR ½ hr - 6 mm 1 hr - 10 mm Hb – 80%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	++	++	+	-	-	-	-	-	-	-

Name : Shenbagam	**Age/Sex : 55/M**	**O.P.No. : 71247**	**From : 12/09/2012**	**To : 10/10/2012**	**No.of Days treated : 28 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 130/80mmhg			**B.P. : 130/80mmhg**		
Excessive appetite and tiredness present since 6 months.	**Blood :** Blood sugar Fasting – 160 mgs% Post prandial – 240mgs% Serum cholesterol - 155mgs% Blood Urea - 30 mgs% Hb A_1 C - 7	TC – 9000 cells/cumm DC - P – 60% L – 32% E – 8% ESR ½ hr – 6 mm 1 hr - 8 mm Hb – 74%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 240 mg% Serum cholesterol - 150mgs% Blood Urea - 30 mgs% Hb A_1C - 6	TC - 9100 cells/cumm DC - P – 64% L – 36% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Mohan	**Age/Sex : 54/M**	**O.P.No. : 78338**	**From : 03/10/2012**	**To : 31/10/2012**	**No.of Days treated : 27 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive appetite and tiredness present since 6 months.	**Before treatment**			**After treatment**		
	B.P. : 140/90mmhg			**B.P. : 140/90mmhg**		
	Blood : Blood sugar Fasting – 97 mgs% Post prandial – 170 mgs% Serum cholesterol - 174mgs% Blood Urea - 18 mgs% Hb A_1 C -	TC – 9400 cells/cumm DC - P – 60% L – 34% E – 2% ESR ½ hr – 5 mm 1 hr - 8 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 60 mgs% Post prandial - 110 mg% Serum cholesterol - 150mgs% Blood Urea - 18 mgs% Hb A_1C -	TC - 9900 cells/cumm DC - P – 60% L – 36% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 82%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Name : Gandhimathi	**Age/Sex : 50/M**	**O.P.No. : 78340**	**From : 03/10/2012**	**To : 31/10/2012**	**No.of Days treated : 27 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive appetite, Excessive urination at night time and tiredness present since 2 years.	**Before treatment**			**After treatment**		
	B.P. : 130/90mmhg			**B.P. : 130/90mmhg**		
	Blood : Blood sugar Fasting – 160 mgs% Post prandial – 232mgs% Serum cholesterol - 154mgs% Blood Urea - 20 mgs% Hb A_1 C -	TC – 9800 cells/cumm DC - P – 56% L – 34% E – 4% ESR ½ hr – 2 mm 1 hr - 4 mm Hb – 70%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 90 mgs% Post prandial - 200 mg% Serum cholesterol - 150mgs% Blood Urea - 18 mgs% Hb A_1C -	TC - 9800 cells/cumm DC - P – 64% L – 32% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 72%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Fair

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Muthamal	**Age/Sex : 55/F**	**O.P.No. : 79011**	**From : 05/10/2012**	**To : 02/11/2012**	**No.of Days treated : 27 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 140/90mmhg			**B.P. : 140/90mmhg**		
Excessive apetite, excessive urination, excessive thirst and tiredness present since 1 ½ years.	**Blood :** Blood sugar Fasting – 140 mgs% Post prandial – 180 mgs% Serum cholesterol - 230mgs% Blood Urea - 18 mgs% Hb A_1 C -	TC – 9600 cells/cumm DC - P – 56% L – 32% E – 2% ESR ½ hr – 4 mm 1 hr - 9 mm Hb – 75%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 140 mg% Serum cholesterol - 150mgs% Blood Urea - 18 mgs% Hb A_1C -	TC - 9400 cells/cumm DC - P – 58% L – 32% E – 2% ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 79%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Name : Muthurajan	**Age/Sex : 50/M**	**O.P.No. : 81261**	**From : 12/10/2012**	**To : 09/11/2012**	**No.of Days treated : 26 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 130/90mmhg			**B.P. : 130/90mmhg**		
Excessive appetite and tiredness present since 8 months	**Blood :** Blood sugar Fasting – 158 mgs% Post prandial – 224mgs% Serum cholesterol - 150mgs% Blood Urea - 17 mgs% Hb A_1 C -	TC – 9300 cells/cumm DC - P – 70% L – 28% E – 2% ESR ½ hr – 2 mm 1 hr - 5 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 168 mg% Serum cholesterol - 140mgs% Blood Urea - 18 mgs% Hb A_1C -	TC - 9200 cells/cumm DC - P – 66% L – 32% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 80%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Thilagavathy	**Age/Sex : 47/F**	**O.P.No. : 81637**	**From : 13/10/2012**	**To : 12/11/2012**	**No.of Days treated : 29 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 120/80mmhg			**B.P. : 120/80mmhg**		
Excessive appetite, excessive urination, excessive thirst and tiredness present since 2 years.	**Blood :** Blood sugar Fasting – 157 mgs% Post prandial – 220 mgs% Serum cholesterol - 155mgs% Blood Urea - 16 mgs% Hb A_1 C - 8	TC – 8100 cells/cumm DC - P – 68% L – 30% E – 2% ESR ½ hr – 6 mm 1 hr - 9 mm Hb – 76%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 132 mgs% Post prandial - 180 mg% Serum cholesterol - 150mgs% Blood Urea - 15 mgs% Hb A_1C - 7	TC - 9000 cells/cumm DC - P – 69% L – 32% E – 2% ESR ½ hr - 5 mm 1 hr - 7 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Fair

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	-	-	-	-	-	-	-

Name : Selvarangam	**Age/Sex : 47/F**	**O.P.No. : 82360**	**From : 16/10/2012**	**To : 14/11/2012**	**No.of Days treated : 28 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 140/90mmhg			**B.P. : 140/90mmhg**		
Excessive appetite and tiredness present since 8 months	**Blood :** Blood sugar Fasting – 160 mgs% Post prandial – 230mgs% Serum cholesterol –250mgs% Blood Urea - 17 mgs% Hb A_1 C - 7	TC – 9600 cells/cumm DC - P – 68% L – 30% E – 2% ESR ½ hr – 3 mm 1 hr - 6 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 180 mg% Serum cholesterol - 200mgs% Blood Urea - 17 mgs% Hb A_1C - 6	TC - 9600 cells/cumm DC - P – 68% L – 30% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 80%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+-	+	+	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Kavitha	**Age/Sex : 62/F**	**O.P.No. : 82595**	**From : 17/10/2012**	**To : 12/11/2012**	**No.of Days treated : 25 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive appetite and tiredness present since 1 year.	**Before treatment**			**After treatment**		
	B.P. : mmhg			**B.P. : mmhg**		
	Blood : Blood sugar Fasting – 156 mgs% Post prandial – 210 mgs% Serum cholesterol - 220mgs% Blood Urea - 19 mgs% Hb A_1 C - 8	TC – 9400 cells/cumm DC - P – 64% L – 34% E – 4% ESR ½ hr – 5 mm 1 hr - 8 mm Hb – 72%	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 180 mg% Serum cholesterol - 200mgs% Blood Urea - 19 mgs% Hb A_1C - 7	TC - 9400 cells/cumm DC - P – 66% L – 34% E – 2% ESR ½ hr - 2 mm 1 hr - 6 mm Hb – 74%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Name : Joseph	**Age/Sex : 53/M**	**O.P.No. : 84285**	**From : 22/10/2012**	**To : 19/11/2012**	**No.of Days treated : 27 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive appetite and tiredness present since 7 months.	**Before treatment**			**After treatment**		
	B.P. : 140/90mmhg			**B.P. : 140/90mmhg**		
	Blood : Blood sugar Fasting – 130 mgs% Post prandial – 184mgs% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1 C - 7	TC – 9800 cells/cumm DC - P – 62% L – 36% E – 4% ESR ½ hr – 8 mm 1 hr - 10 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 120 mgs% Post prandial - 160 mg% Serum cholesterol - 120mgs% Blood Urea - 16 mgs% Hb A_1C - 6	TC - 9800 cells/cumm DC - P – 64% L – 34% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 80%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Fair

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	+	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Sagunthala	**Age/Sex : 71/F**	**O.P.No. : 84276**	**From : 22/10/2012**	**To : 19/11/2012**	**No.of Days treated : 27 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 140/80mmhg			**B.P. : 130/80mmhg**		
Excessive appetite, excessive urination at night time and tiredness present since 1 ½ year.	**Blood :** Blood sugar Fasting – 160 mgs% Post prandial – 232mgs% Serum cholesterol - 154mgs% Blood Urea - 18 mgs% Hb A_1 C - 8	TC – 9900 cells/cumm DC - P – 56% L – 34% E – 2% ESR ½ hr – 2 mm 1 hr - 4 mm Hb – 73%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 90 mgs% Post prandial - 110 mg% Serum cholesterol - 150mgs% Blood Urea - 18 mgs% Hb A_1C - 7	TC - 9900 cells/cumm DC - P – 64% L – 32% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 82%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	-	-	-	-	-	-	-

Name : Gandhimathi	**Age/Sex : 73/F**	**O.P.No. : 84555**	**From : 23/10/2012**	**To : 19/11/2012**	**No.of Days treated : 26 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 120/80mmhg			**B.P. : 120/80mmhg**		
Excessive appetite and tiredness present since 6 months.	**Blood :** Blood sugar Fasting – 160 mgs% Post prandial – 240mgs% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1 C -	TC – 8100 cells/cumm DC - P – 68% L – 30% E – 2% ESR ½ hr – 6 mm 1 hr - 9 mm Hb – 76%	**Urine :** Alb - Nil Sugar F - Nil PP – - Dep -NAD	**Blood :** Blood sugar Fasting – 102 mgs% Post prandial - 140 mg% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1C -	TC - 9800 cells/cumm DC - P – 70% L – 25% E – 5% ESR ½ hr - 3 mm 1 hr - 5 mm Hb – 75%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Ravichandran	**Age/Sex : 49/M**	**O.P.No. : 85206**	**From : 26/10/2012**	**To : 23/11/2012**	**No.of Days treated : 27 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 140/80mmhg			**B.P. : 140/80mmhg**		
Excessive appetite, excessive urination at night time and tiredness present since 1 year.	**Blood :** Blood sugar Fasting – 140 mgs% Post prandial – 220 mgs% Serum cholesterol - 180mgs% Blood Urea - 16 mgs% Hb A_1 C -	TC – 9500 cells/cumm DC - P – 55% L – 32% E – 5% ESR ½ hr – 2 mm 1 hr - 5 mm Hb – 79%	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 100 mgs% Post prandial - 110 mg% Serum cholesterol - 150mgs% Blood Urea - 18 mgs% Hb A_1C -	TC - 9500 cells/cumm DC - P – 64% L – 36% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 82%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Name : Mary	**Age/Sex : 50/F**	**O.P.No. : 88260**	**From : 05/11/2012**	**To : 25/12/2012**	**No.of Days treated : 45 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 140/80mmhg			**B.P. : 140/80mmhg**		
Excessive appetite and tiredness present since 10 months.	**Blood :** Blood sugar Fasting – 196 mgs% Post prandial – 264mgs% Serum cholesterol - 210mgs% Blood Urea - 16 mgs% Hb A_1 C -	TC – 9600 cells/cumm DC - P – 64% L – 30% E – 4% ESR ½ hr – 8 mm 1 hr - 16 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 170mgs% Post prandial - 210 mg% Serum cholesterol - 150mgs% Blood Urea - 18 mgs% Hb A_1C -	TC - 9800 cells/cumm DC - P – 66% L – 34% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 80%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	+	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Mohammed Ali	**Age/Sex : 51/M**	**O.P.No. : 89300**	**From : 07/11/2012**	**To : 05/12/2012**	**No.of Days treated : 28 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive appetite and tiredness present since 7 months.	**Before treatment**			**After treatment**		
	B.P. : 160/80mmhg			**B.P. : 160/80mmhg**		
	Blood : Blood sugar Fasting – 100 mgs% Post prandial – 164 mgs% Serum cholesterol - 150mgs% Blood Urea - 17 mgs% Hb A_1 C -	TC – 9300 cells/cumm DC - P – 70% L – 28% E – 2% ESR ½ hr – 2 mm 1 hr - 5 mm Hb –	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 80 mgs% Post prandial - 130 mg% Serum cholesterol - 140mgs% Blood Urea - 18 mgs% Hb A_1C -	TC - 9300 cells/cumm DC - P – 66% L – 32% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb –	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Name : Mayavan	**Age/Sex : 58/M**	**O.P.No. : 71248**	**From : 12/09/2012**	**To : 10/10/2012**	**No.of Days treated : 28 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive appetite, excessive thrist, excessive urination and tiredness present since 1 year.	**Before treatment**			**After treatment**		
	B.P. : 140/80mmhg			**B.P. : 140/80mmhg**		
	Blood : Blood sugar Fasting – 130 mgs% Post prandial – 250mgs% Serum cholesterol - 230mgs% Blood Urea - 16 mgs% Hb A_1 C -	TC – 6100 cells/cumm DC - P – 60% L – 33% E – 7% ESR ½ hr – 3 mm 1 hr - 6 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 190 mg% Serum cholesterol - 180mgs% Blood Urea - 18 mgs% Hb A_1C -	TC - 6400 cells/cumm DC - P – 64% L – 36% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 80%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Gomathi	**Age/Sex : 52/F**	**O.P.No. : 1748**	**From : 30/05/2012**	**To : 23/06/2012**	**No.of Days treated : 23 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 140/90mmhg			**B.P. : 140/90mmhg**		
Excessive intake of food, excessive urination, excessive thirst and tiredness present since 7 moths years	**Blood :** Blood sugar Fasting – 90 mgs% Post prandial – 180 mgs% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1 C -	TC – 9100 cells/cumm DC - P – 68% L – 36% E – 4% ESR ½ hr – 8 mm 1 hr - 10 mm Hb – 74%	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 70 mgs% Post prandial - 110 mg% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1C -	TC - 9100 cells/cumm DC - P – 68% L – 38% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 76%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	-	-	-	-	-	-	-	-	-	-

Name : Rani	**Age/Sex : 64/F**	**O.P.No. : 4673**	**From : 29/11/2012**	**To : 31/12/2012**	**No.of Days treated : 32 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 140/80mmhg			**B.P. : 140/80mmhg**		
Excessive appetite, excessive urination at night time and tiredness present since 1 year.	**Blood :** Blood sugar Fasting – 140 mgs% Post prandial – 220mgs% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1 C -	TC – 9600 cells/cumm DC - P – 64% L – 32% E – 4% ESR ½ hr – 8 mm 1 hr - 16 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 200 mg% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1C -	TC - 9600 cells/cumm DC - P – 66% L – 32% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Prakash	**Age/Sex : 71/M**	**O.P.No. : 75946**	**From : 26/09/2012**	**To : 24/10/2012**	**No.of Days treated : 28 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive appetite, excessive urination at night time and tiredness present since 2 years.	**Before treatment**			**After treatment**		
	B.P. : 120/80mmhg			**B.P. : 120/80mmhg**		
	Blood : Blood sugar Fasting – 140 mgs% Post prandial – 213 mgs% Serum cholesterol - 180mgs% Blood Urea - 16 mgs% Hb A_1 C -	TC – 9500 cells/cumm DC - P – 55% L – 32% E – 5% ESR ½ hr – 2 mm 1 hr - 5 mm Hb – 79%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 120 mgs% Post prandial - 200 mg% Serum cholesterol - 150mgs% Blood Urea - 18 mgs% Hb A_1C –	TC - 9500 cells/cumm DC - P – 64% L – 36% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 80%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Fair

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	-	-	-	-	-	-	-

Name : Selvaraj	**Age/Sex : 73/M**	**O.P.No. : 64118**	**From : 12/10/2012**	**To : 12/11/2012**	**No.of Days treated : 30 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive appetite, excessive urination at night time and tiredness present since 2 years.	**Before treatment**			**After treatment**		
	B.P. : 140/80mmhg			**B.P. : 140/80mmhg**		
	Blood : Blood sugar Fasting – 150 mgs% Post prandial – 210mgs% Serum cholesterol - 116mgs% Blood Urea - 19 mgs% Hb A_1 C - 7	TC – 9700 cells/cumm DC - P – 67% L – 30% E – 3% ESR ½ hr – 3 mm 1 hr - 9 mm Hb – 74%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 90 mgs% Post prandial - 180 mg% Serum cholesterol - 180mgs% Blood Urea - 15 mgs% Hb A_1C - 6	TC - 9800 cells/cumm DC - P – 70% L – 25% E – 5% ESR ½ hr - 3 mm 1 hr - 5 mm Hb – 75%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	-	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN OUT PATIENTS

Name : Meenakshi	**Age/Sex : 62/F**	**O.P.No. : 90346**	**From : 09/11/2012**	**To : 30/11/2012**	**No.of Days treated : 19 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 140/90mmhg			**B.P. : 140/90mmhg**		
Excessive appetite, excessive urination at night time and tiredness present since 1 ½ years.	**Blood :** Blood sugar Fasting – 160 mgs% Post prandial – 220 mgs% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1 C - 8	TC – 9400 cells/cumm DC - P – 64% L – 32% E – 4% ESR ½ hr – 4 mm 1 hr - 8 mm Hb – 72%	**Urine :** Alb - Nil Sugar F - Nil PP – Nil Dep -NAD	**Blood :** Blood sugar Fasting - 120 mgs% Post prandial - 190 mg% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1C - 7	TC - 9400 cells/cumm DC - P – 66% L – 30% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 79%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	++	++	+	-	-	-	-	-	-	-

Name : Boothammal	**Age/Sex : 50/F**	**I.P.No. : 3545**	**From : 12/10/2012**	**To : 07/11/2012**	**No.of Days treated : 25 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 140/80mmhg			**B.P. : 140/80mmhg**		
Excessive appetite, excessive urination at night time and tiredness present since 1 year.	**Blood :** Blood sugar Fasting – 158 mgs% Post prandial – 224mgs% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1 C -	TC – 9300 cells/cumm DC - P – 70% L – 28% E – 2% ESR ½ hr – 2 mm 1 hr - 5 mm Hb – 76%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 150 mg% Serum cholesterol - 150mgs% Blood Urea - 16 mgs% Hb A_1C -	TC - 9300 cells/cumm DC - P – 66% L – 32% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb –	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	+	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN IN PATIENTS

Name : Arumugam	**Age/Sex : 72/M**	**I.P.No. : 3191**	**From : 24/09/2012**	**To : 22/10/2012**	**No.of Days treated : 28 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive appetite, excessive urination and tiredness present since 3 years.	**Before treatment**			**After treatment**		
	B.P. : 140/90mmhg			**B.P. : 140/90mmhg**		
	Blood : Blood sugar Fasting – 140 mgs% Post prandial – 220 mgs% Serum cholesterol - 150mgs% Blood Urea - 18 mgs% Hb A_1 C -	TC – 8100 cells/cumm DC - P – 68% L – 30% E – 2% ESR ½ hr – 6 mm 1 hr - 9 mm Hb – 76%	**Urine :** Alb - Nil Sugar F - Nil PP – ++ Dep -NAD	**Blood :** Blood sugar Fasting - 70 mgs% Post prandial - 118 mg% Serum cholesterol - 150mgs% Blood Urea - 18 mgs% Hb A_1C - 7	TC - 9000 cells/cumm DC - P – 64% L – 36% E – 2% ESR ½ hr - 5 mm 1 hr - 7 mm Hb – 76%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	++	+	+	+	-	-	-	-	-	-

Name : Chandra	**Age/Sex : 55/F**	**I.P.No. : 3172**	**From : 23/09/2012**	**To : 17/10/2012**	**No.of Days treated : 24 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
Excessive appetite, excessive urination and tiredness present since 1 year.	**Before treatment**			**After treatment**		
	B.P. : 140/80mmhg			**B.P. : 120/70mmhg**		
	Blood : Blood sugar Fasting – 196 mgs% Post prandial – 250mgs% Serum cholesterol - 230mgs% Blood Urea - 16 mgs% Hb A_1 C - 7	TC – 9400 cells/cumm DC - P – 60% L – 30% E – 3% ESR ½ hr – 3 mm 1 hr - 9 mm Hb – 74%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 190 mg% Serum cholesterol - 180mgs% Blood Urea - 16 mgs% Hb A_1C - 6	TC - 9400 cells/cumm DC - P – 64% L – 36% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 77%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	+	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN IN PATIENTS

Name : Vedhamuthu	**Age/Sex : 71/M**	**I.P.No. : 2990**	**From : 10/09/2012**	**To : 11/10/2012**	**No.of Days treated : 30 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 160/80mmhg			**B.P. : 160/80mmhg**		
Excessive appetite, excessive urination and excessive thirst and tiredness present since 1 year.	**Blood :** Blood sugar Fasting – 158 mgs% Post prandial – 210 mgs% Serum cholesterol - 150mgs% Blood Urea - 14 mgs% Hb A_1 C - 8	TC – 9000 cells/cumm DC - P – 60% L – 36% E – 4% ESR ½ hr – 4 mm 1 hr - 8 mm Hb – 72%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 110 mgs% Post prandial - 164 mg% Serum cholesterol - 140mgs% Blood Urea - 14 mgs% Hb A_1C - 7	TC - 9100 cells/cumm DC - P – 70% L – 28% E – 2% ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 82%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	+	-	-	-	-	-	-

Name : Madathy	**Age/Sex : 71/F**	**I.P.No. : 2555**	**From : 04/08/2012**	**To : 08/09/2012**	**No.of Days treated : 34 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 160/90mmhg			**B.P. : 160/90mmhg**		
Excessive appetite, excessive urination and tiredness present since 1 year.	**Blood :** Blood sugar Fasting – 180 mgs% Post prandial – 260mgs% Serum cholesterol - 220mgs% Blood Urea - 18 mgs% Hb A_1 C - 7	TC – 9500 cells/cumm DC - P – 55% L – 32% E – 5% ESR ½ hr – 2 mm 1 hr - 5 mm Hb – 78%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 120 mgs% Post prandial - 210 mg% Serum cholesterol - 200mgs% Blood Urea - 18 mgs% Hb A_1C - 6	TC - 9500 cells/cumm DC - P – 64% L – 36% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 80%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	+	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

Poor Response - Insignificant reduction but no to normal level of fasting and post prandial blood sugar and glycosuia

Mild	-	+
Moderate	-	++
Severe	-	+++

REPORTS ON THE CLINICAL TRIALS OF VELLALLIPOO CHOORANAM IN IN PATIENTS

Name : Mariyal	**Age/Sex : 60/F**	**I.P.No. : 1869**	**From : 11/06/2012**	**To : 18/07/2012**	**No.of Days treated : 37 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 130/80mmhg			**B.P. : 120/70mmhg**		
Excessive intake of food, excessive urination, excessive thirst and tiredness present since 3 years.	**Blood :** Blood sugar Fasting – 178 mgs% Post prandial – 240 mgs% Serum cholesterol - 250mgs% Blood Urea - 24 mgs% Hb A_1 C - 8	TC – 9000 cells/cumm DC - P – 60% L – 36% E – 4% ESR ½ hr – 4 mm 1 hr - 8 mm Hb – 72%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 126 mgs% Post prandial - 200 mg% Serum cholesterol - 220mgs% Blood Urea - 23 mgs% Hb A_1C - 7	TC - 9100 cells/cumm DC - P – 70% L – 28% E – 2% ESR ½ hr - 3 mm 1 hr - 6 mm Hb – 82%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	+	-	-	-	-	-	-	-

Name : Anthony	**Age/Sex : 72/M**	**I.P.No. : 3545**	**From : 12/10/2012**	**To : 12/11/2012**	**No.of Days treated : 30 days**
Drug : Vellallipoo chooranam – 1gm bd with hot water					**Diagnosis : Madhumegam**

Complaints of	**INVESTIGATION**					
	Before treatment			**After treatment**		
	B.P. : 140/80mmhg			**B.P. : 140/80mmhg**		
Excessive appetite, excessive urination at night time and tiredness present since 2 years.	**Blood :** Blood sugar Fasting – 150 mgs% Post prandial – 220mgs% Serum cholesterol - 210mgs% Blood Urea - 15 mgs% Hb A_1 C - 7	TC – 9200 cells/cumm DC - P – 53% L – 40% E – 4% ESR ½ hr – 8 mm 1 hr - 10 mm Hb – 69%	**Urine :** Alb - Nil Sugar F - Nil PP – + Dep -NAD	**Blood :** Blood sugar Fasting - 90 mgs% Post prandial - 180 mg% Serum cholesterol - 180mgs% Blood Urea - 15 mgs% Hb A_1C - 6	TC - 9200 cells/cumm DC - P – 55% L – 40% E – 2% ESR ½ hr - 2 mm 1 hr - 4 mm Hb – 70%	**Urine :** Alb - Nil Sugar F - Nil PP - Nil Dep - NAD
					Response :	Good

No. of weeks after Urine sugar - PP	**1st**	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
	+	+	-	-	-	-	-	-	-	-

Good Response – Reduction of fasting and post prandial blood sugar and glycosuira

Fair Response - Significant reduction but not to normal level of fasting and post prandial blood sugar and glyosuria

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Mild	-	+
Moderate	-	++
Severe	-	+++

INTRODUCTION

Siddha system of medicine is not a discovery but a gradual evolution during successive periods of History. It owes it progress to great men **'the siddhars'** who have not only enriched the science, but also society and civilization as a whole.

According to them the Universe is represented in everyone of its particles. They realized that a good physical body free from disease is a great tool to attain the **'Eternal bliss'.** The **Pranan (Life force), Manam (mind), buddhi (intellect)** and energy act in harmony that indeed in yogam. In this process they evolved a system primarily for healthy and promitive living and also for elimination of disease.

According to siddha healthy living indicates not only Physical health but also Psychological, social and spiritual well being.

Anaemia is the most common disorder of the blood. **'Senneer'** is the second of the seven physical constituents and the **'Ranjaka Pitham'** gets dearranged.

According to modern concept there are several kinds of Anaemia and main cause of Anaemia include deficient red blood cell Production due to **nutritional deficiency of iron, excessive blood loss and excessive blood cell destruction**.

Anaemia goes undetected in many people due to minor symptoms like weakness, fatigue, general malaise and poor concentration. It is essential to emphasize the importance of preventing anaemia in the present day society.

The Materia Medica of Siddha Medicine is very vast, as they contain the usage of metals, minerals and biological products. The use of inorganics is justified by the fact that they do not perish fast like herbal drugs and can also be used when the herbs are unavailable.

Here I have brought out the efficacy of metal drug **'Kaandha Chendhuram'** for the treatment of **Anaemia,** with promising result.

AIM AND OBJECTIVES

A STUDY ON KAANDHA CHENDHURAM

The main aim and objective, of this dissertation is to do a Scientific review of **the haematinic activity of kaandha chendhuram** based on the reference of **"Kannusamy Parambarai Vaithiyam (Page No: 317)"** to be tested through pharmacological and clinical trials.

Anaemia is the most common disorder of blood. In Siddha aspect, this can be correlated with **Paandu Noi.** The clinical signs and symptoms of 'Paandu' are seen in Anaemia.

Anaemia goes undetermined in many people and symptoms can be minor or vague. According to recent survey in India the percentage of people affected by anaemia according to age group are estimated below.

47% of children younger than 5.

56% of Adolescence girls.

30% of Adolescence boys.

55.3% of women of Reproductive age.

40% of elder people.

It is essential to find out a drug which is very effective in smaller doses, easy to preserve, longer in self life. So the author has selected **Kaandha Chenduram for iron deficiency Anaemia** drug for dissertation purpose.

In this dissertation the analyis of kaandha chendhuram is done in the following methods like,

1) Gunapadam aspect
2) Bio-Chemical Analysis
3) Pharmacological Analysis
4) Quantitaive & Qualitative Chemical Analysis
5) Heavy Metal Analysis
6) Bio Static Analysis
7) Clinical assessment

REVIEW OF LITERATURE
GEOLOGICAL ASPECTS
MAGNET

Category	:	Mineral
Chemical formula	:	Iron (II, III) oxide, Fe_3O_4
Colour	:	Black, grayish
Crystal habit	:	Octahedral, fine granular to massive
Fracture	:	Uneven (or) subconchoidal
Mohs scale hardness	:	5.5-6.5
Luster	:	Metallic
Specific gravity	:	5.17-5.18
Streak	:	Black
Refractive index	:	Opaque

Composition:

Ferrous and ferric iron oxide (72.4% Fe, 27.6% O) also written $FeO.Fe_2O_3$. Other elements Magnesium, Zinc and Manganese (rarely Nickel) can substitute in part for the first (the FeO, or ferrous) iron, while small amount of chromium, Aluminium, Manganic, Manganese and Vanadium can replace part of the second the (Fe_2O_3 or ferric) iron. This permits a whole second spine series of related minerals to which different names have been given, but magnetite in by far the most important.

Tests:

Naturally magnetic

Distinguishing characteristics:

The magnetism (and frequent polarity) distinguishes it from most other similar minerals.

The streak is blacker than that of ilmenite. It is brittle and much lower in gravity than platinum mixed with iron or the native nickel – iron compounds. Zinc rich magnetite (franklinite) is less magnetic.

Occurrence:

An important ore of iron Magnetic and other heavy minerals (dark) in a quartz beach and Chennai India.

Magnetite is sometimes found in large quantities in beachy sand. Such black sands (mineral sands or iron sands) are found in various places such as California and the west coast of New Zealand.

The Magnetite is carried to the beach via rivers from erosion and is concentrated via wave action and currents.

Huge deposits have been found in banded iron formations. There sedimentary rocks have been used to inter changes in the oxygen content of the atmosphere of the earth.

Large deposits of magnetite are also found in the Atacama region of chile, kiruna, Sweden, the Pilbara, Midwest & Northern Gold fields regions in Western Australia & in the Adirondack region of Newyork in the united states.

Deposits are found in Norway, Germany, Italy, South Africa, India, Mexico & Oregon, North Carolina, New Mexico, Colorado in the united states.

Recently in June 2005 an exploration company, Cardero resources discovered a vast deposit of magnetite, it bearing sand dunes in peru.

The sand contain 10% magnetite.

Biological occurrences:

Crystals of Magnetite have been found in some bacteria (eg. Magneto spirillum, Magneto tacticum) and in the brains of bees, of termites, fish, some birds (eg: the pigeon) and the humans. The chitons have teeth made of magnetite on their radula making them unique among animals.

GUNAPADAM ASPECTS

[1]காந்தம் (Magnetic oxide of Iron)

தோற்றம்:

இரும்புக் குணமுடைய ஓர் உலோகம் மற்ற உலோகங்களைப் போலவே பூமியினின்று வெட்டியெடுக்கப்படுகிறது.

வேறுபெயர்:

- சிவலோகச் சேவகன்
- தரணிக்கு நாதம்
- சூத அங்குசம்
- நவலோகத் துரட்டி
- காயசித்திக்கு பாத்திரவான்
- முருகன் புராணம்

பொதுகுணம்:

"காந்தத்தாற் சோபை குன்மங் காமிலமே கம்**பாண்டு**
சோத்ததிரி தோடவெட்டை சீதங்கால் ஓய்ந்தபசி
பேருதரங் கண்ணோய் பிரமியநீ ராமையும் போம்
ஓரினிறை யாயுளுறும் உன்."

காந்தக்கல் வீக்கம், குன்மம், காமாலை, மேகம், **பாண்டு**, முத்தோடம், வெள்ளை வீழல், சீதம், வாதநோய், மாந்தம், மகோதரம், விழிநோய், பிரமியம், நீராமைக்கட்டி முதலியன நீங்கும். பூரண ஆயுளும் உண்டாகும்.

காந்த சத்துரு மித்துரு:

"எண்ணிய காந்த மியல் பானாலுக்குந்
தண்ணியமித் துரசத் தரகேட்டிரு
நண்ணு மிரும்புக்கு நாட்டும் வகைபதை
உண்ணியுறைந் வுண்மையாய்ப் பார்த்திடே
பார்த்திடு நாகம் பதறிய சத்துரு
போத்துங் கிளிஞ்சிப் பொருந்திய அண்டமும்
காத்து வெடியுங்கள் நெப்பு வங்கமும்

[1] Gunapadam Thathu Vaguppu

ஆத்தும்படி கமருளான சங்கமே
தங்கந் திராவந் தனிவெள்ளி வெங்கலம்
பொங்கு நண்போடு பக வீர சிங்குடன்
அங்கமிளகு அவின வெள்ளை பாஷாணம்
மங்கும் வடிலைவள ரன்ன பேதியே”

காந்த சத்துரு:

போகர் நிகண்டின் படி காந்தத்திற்குள்ள இழுக்கும் சக்தியை கெடுக்கும் பொருட்கள் நவாச்சாரம், வெடியுப்பு, துருசு.

காந்த மித்துரு:

இரும்பு

காந்தத்தின் சிறப்பு:

காந்தத்தால் செய்த பாத்திரத்தில் பால் விட்டு காய்ச்சிக் குடித்து வந்தால் இரத்த விருத்தி உண்டாகும். துர்ப்பலம் நீங்கும். தேகம் மேனி தரும். காந்தப் பாத்திரத்தில் பால் விட்டு காய்ச்சினால் பொங்கி உள்ளேயே நிற்கும். பால் வெளியில் வராது. இ.ந்து ஓர் விஷேட குணம்.

சிறந்த காந்தத்தால் ஆன பாத்திரத்தின் தண்ணீரில் ஒரு துளி எண்ணெய் விட அது தண்ணீரில் பரவாமல் இருக்கும்.

காந்தத்தின் மேல் வேப்பிலையின் கந்தகத்தை பூச வேப்பிலையின் கசப்பு நீங்கும்.

காந்தத்தின் வகைகள்:

காந்தம் 5 வகைப்படும். அவை

- பிராமுகம்
- கம்பகம்
- கர்ஷகம்
- திராவகம்
- ரோமகம்

இவற்றின் முறையே

- கற்காந்தம்
- ஊசிகாந்தம்
- பச்சைக்காந்தம்

- அரக்குக்காந்தம்

மயிர்க்காந்தம் என 5 வகைகள் உள்ளன.

பிராமுகம் - லோகத்தை பிரமிக்கப் பண்ணும்

கம்பகம் - லோகத்தை இழுத்துக் கொள்ளும்

கர்ஷகம் - லோகத்தை தூர ஓட்டும்

திராவகம் - லோகத்தை தண்ணீராக்கி விடும்

ரோமகம் - லோகத்தில் மயிர் போல தோற்றுவிக்கும்

லோகத்தை மிடுக்காய் இழுக்கின்ற இடத்திற்கு முகம் என்று பெயர். காந்தத்திற்கு ஐந்து முகங்களும் அதற்கு மேற்பட்ட முகங்களும் இருப்பதுண்டு. 5 முகங்களுக்கு மேற்பட்ட சர்வமுகங்களுள்ள காந்தமே சிறந்தது.

சுவை (Taste) : துவர்ப்பு (Astringent), சிறுபான்மை புளிப்பு (Slightly Sour), கைப்புச் சுவை (Bitter)

வீரியம் (Bio Transformation) : வெப்ப வீரியம் (Hot)

செய்கை:

பசியுண்டாக்கி (Stomachic)

உடல் உரமாக்கி (Nutritive)

குருதிப்பெருக்கி (Cordial)

உடற்தேற்றி (Alterative)

காந்த சுத்தி முறை:

"துவைத் திருவாய் ஏழுவிசை எருக்கம் பாலில்
சொல்லுகிறேன் நல்லெண்ணெய் கோமயத்தில்
சுவைத்தியாம் தாம்பரத்தைச் சூட்டு சாட்டு
சூட்சமாம் தாம்பிர சுத்தியாச்சு
நிவர்த்தயாம் லோகங்கள் பொன்னமாகும்
நேர்மையங் காந்த சுத்தி சாட்ட நிகேள்
துகப்பற்றுங் காந்தத்தை துண்டாய் பேட்டே"

காந்தத்தை கொல்லன் உலையில் விட்டு காய்ச்சி ஏழு (அ) 21 முறை கொள்ளுக் குடிநீரில் தோய்த்துக் கழுவி எடுக்க சுத்தியாகும்.

சுத்தி முறை வேறு:

காந்தத்தை பொடித்து முடிகட்டி காடியிலும் கொள்ளுக்குடிநீரிலும் முறையே அவித்து எடுத்து கழுவி உலர்த்தி எடுக்க சுத்தியாம்.

சுத்தி முறை வேறு:

எலுமிச்சம் பழச்சாறு, புளித்த காடி, புளித்த மோர் இவைகளில் முறையே மும்மூன்று நாள் காந்தத்தை ஊறவைத்து வெயிலில் வைத்து எடுக்க சுத்தியாம்.

[2]காந்தச்செந்தூரம்

காந்தத்தை கொல்லன் உலையிலிட்டு காய்ச்சி பசுநீரில் சாய்க்கவும். இவ்வாறு 7 முறை செய்ய காந்தம் சுத்தியாகும்.

காந்தத்தை கரிசாலை சாற்றில் 12மணி நேரம் அரைத்து வில்லை செய்து சில்லிட்டு சிலை செய்து புடமிடவும். பின் புடமிட்ட காந்தத்தை மேற்படி சாறு விட்டு 9மணி நேரம் அரைத்து வில்லை செய்து சில்லிட்டு சீலை செய்து புடமிடவும். இவ்வாறே சோற்றுகற்றாழை, நாவல்பட்டை, அரசம்பட்டை, அரசம்பட்டை சாற்றில் புடமிட்டு அரைத்து எடுத்துக் கொள்ளவும்.

அளவு : 100 மி.கி.

அனுபானம் : தேன்

தீரும் நோய் : மதுமேகம், பாண்டு, சோகை, காமாலை

காந்தம் சேரும் பாண்டுக்கான மருந்துகள்

1) [3]பாண்டுமதேப சிம்மசூதம்

அளவு : குன்றி எடை மாத்திரை

அனுபானம் : அனுபானங்களின் விசேஷங்களில் கொடுக்க

தீரும் நோய் : பாண்டு, சுரம், தாகம், இரத்த பித்தம், குன்மம், சுவாசம், காசம், சுரபேதம், அக்கினி மாந்தம், மூர்ச்சை, உபதங்கள், பித்த வியாதி இவைகளை நாசப்படுத்தும்

[2] கண்ணுசாமி பரம்பரை வைத்தியம் ப.எ.37

[3] ஆதாரம் : அனுபவ வைத்திய தேவ ரகசியம் பக்க எண் 369

2) [4]காந்த செந்தூரம்.

அளவு : குன்றி எடை தினம் 2 வேளை.
தேன் அல்லது தக்க அனுபானம்.

தீரும் நோய் : பாண்டு, சோகை, காமாலை, வெப்பு, பித்தசுரம், வெண்மேகம்.

3)[5]இரதாதி சூரணம்

அளவு : 3 பணவெடை வீதம்

அனுபானம் : தேன்

தீரும் நோய் : குளிர், குழைப்பு, பாண்டு, காமாலை, சோகை, முறை

4. [6]இரதாதிக் குமரி பற்பம்

அளவு : 4 பணவெடை தூள் (13 குன்றிமணி)

அனுபானம் : தேன்

தீரும் நோய் : நீராமை, மகோதரம், பாண்டு, விட உடம்பு வீக்கம், செரிமானம் இல்லாமை, புளித்த ஏப்பம், அதிக கழிச்சல், வாத பித்தங்களினால் ஏற்படும் 108 வியாதிகளும் தீரும்.

5) [7]**மண்டூரச் செந்தூரம்**

சேரும் சரக்குகள் : மண்டூரச் சிந்தூரம் - 3 1/3 குன்றி
காந்த சிந்தூரம் - 6 2/3 குன்றி

அனுபானம் : தேன்

தீரும் நோய் : சாகை, பித்த பாண்டு, பித்தம், காமாலை, ஈளை, மகோதரம், இருமல், பெருவயிறு,

6) [8]**காந்தாதி மண்டூரச் சிந்தூரம்**

சேரும் சரக்குகள் : மண்டூரச்சிந்தூரம் - 2பணவெடை
காந்த. செந்தூரம் - 1 பணவெடை

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[4] அனுபவ வைத்திய தேவ ரகசியம் பக்க எண் 381.
[5] சர.வைத்திய முறைகள் பாண்டு, காமாலை, சிகிச்சை பக்க எண் 15
[6] சர.வை.முறைகள் பாண்டு, காமாலை – பக்க எண் 24 சிகிச்சை
[7] சர.வை.முறை பாண்டு காமாலை சிகிச்சை பக்க எண் 30
[8] சர.வை.முறை பாண்டு காமாலை சிகிச்சை பக்க எண் 30

அனுபானம் : நெய்

தீரும் நோய் : மகோதரம், சோகை, பித்த பாண்டு, காமாலை, பெருவயிறு, பீலிகை, திமிரம், ஊதுகாமாலை, இருமல்.

7) [9]**எலுமிச்சம்பழ லேகியம்**

அளவு : கழற்சிக்காய் அளவு

தீரும் நோய் : பாண்டு, காமாலை, வாந்தி இளைப்புத் தீரும்.

எலும்பை பற்றிய சுரம், கை,கால் அசதி, அதிசாரம், மந்தாக்கினி, 11 வகை விப்புருதி, ஆகார வெறுப்பு. சுரம், ரத்தமின்மை, உடல்வீக்கம், கரப்பான்.

8) [10]**கரிப்பானாதி லேகியம்**

அளவு : கொட்டைப்பாக்களவு

அனுபானம் : தேன்

தீரும் நோய் : பித்தபாண்டு, காமாலை, குன்மம், பித்தம் விசூஷபாண்டு.

9) [11]**அரப்பொடியாதி வடகம்**

அளவு : புளியங்கொட்டை அளவு

அனுபானம் : கையாந்தகரைச் சாறு

தீரும் நோய் : சோகை, பித்தபாண்டு

10) [12]**லேகியம் - பாண்டு முதலியவைகளுக்கு**

அளவு : 1 பாக்களவு

தீரும் நோய் : விசூஷபாண்டு, பிதத பாண்டு, காமாலை, தீரும், தாதுபுஷ்டி உண்டாகும்.

[9] சர.வை.முறை பாண்டு காமாலை சிகிச்சை பக்க எண் 40
[10] சர.வை.முறை பாண்டு காமாலை சிகிச்சை பக்க எண் 52
[11] சர.வை.முறை பாண்டு காமாலை சிகிச்சை பக்க எண் 56
[12] சர.வை.முறை பாண்டு காமாலை சிகிச்சை பக்க எண் 62

11.[13]கிட்டாதிச் சூரணம்

அளவு : மூவிரல் கொள்ளுமளவு

அனுபானம் : வெந்நீருடன்

தீரும் நோய் : வீக்கம், பாண்டு, காமாலை

12) [14]**காந்த பற்பம்**

அளவு : 1-2 குன்றி

அனுபானம் : பூண்டு தைலம், மிளகு தைலம், துளசிசாறு

தீரும் நோய் : பித்த பாண்டு, மஞ்சள் நோய், குழவி பெருங்கழிச்சல் வெப்புபிணி, இரத்தகாச நோய், மார்புநோய், பக்கநோய், வியர்வை, எரிகுன்மம், பாண்டு.

13) [15]**காந்த செந்தூரம்**

அளவு : 3-4 குன்றி எடை

தீரும் நோய் : மஞ்சள் நோய், பாண்டு, சோகை

14) [16]**காந்த செந்தூரம்**

அளவு : 3-4 குன்றி எடை

அனுபானம் : ஏல்சசி, கசகசா, நற்சீரகம், மிளகு இவற்றை சமமாக இடித்து துணியில் வடிகட்டி வைத்துக் கொள்ளவும். இந்த கலவை தூள் ¼ எடை, நெய் அல்லது வெண்ணெய் 1 விரலகன அளவு இவ்விரண்டையும் கலந்து மேற்படி செந்தூரத்தை அனுபானித்து உட்கொள்ள வேண்டும்.

தீரும் நோய் : பித்த பாண்டு, சோகை, மஞ்சள் நோய், கிராணி, மூலவாயு, ஆசிகவாயு தீரும்.

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[13] சர.வை.முறை பாண்டு காமாலை சிகிச்சை பக்க எண் 80

[14] அனுபவ வைத்திய நவநீதம் பாகம் -1 பக்க எண் 59

[15] அனுபவ வைத்திய நவநீதம் பாகம் -1 பக்க எண் 61

[16] அனுபவ வைத்திய நவநீதம் பாகம் -1 பக்க எண் 62

15) [17]**லோகமாரண காந்த செந்தூரம்**

அனுபானம் : தேன், நெய், வாதுமை அல்வா, வெண்ணெய்

தீரும் நோய்கள் : வாயு சம்மந்தமான பாண்டு நோய்கள், சோகை, மஞ்சள் நோய், குன்மம், செரியாமை, முறை நோய்கள்

16) [18]**அயக்காந்தப் பற்பம் (வேறு)**

அளவு : 2-4 குன்றி

அனுபானம் : தேன், நெய், சமயோசித இளகம்

தீரும் நோய் : வாதசூலை, குன்ம சூலை, கடுப்பு. இளைப்பு, எல்லாவித வயிற்று நோய்கள், ஊதல், எண்வகை பாண்டு, மஞ்சள் நோய், சோகை முதலியன தீரும்.

17) [19]**சுவர்ணயோக காந்தச் செந்தூரம்**

அளவு : 1-2 குன்றி

அனுபானம் : நெய், தேன்-அந்தந்த நோய்க்கு ஏற்ற குடிநீர், இளகம், நெய்கள், மணப்பாகுகள் ஆகியவைகளுடன் கலந்து கொடுக்க வேண்டும்.

தீரும் நோய் : சயம், இருமல், இரத்த சலம், குருதி இருமல், நீரிழிவு, மதுமேகம், பாண்டு சோகை. தாதுநட்டம், விந்து நட்டம்

[17] அனுபவ வைத்திய நவநீதம் பாகம் -1 பக்க எண் 64
[18] அனுபவ வைத்திய நவநீதம் பாகம் -1 பக்க எண் 75

[19] அனுபவ வைத்திய நவநீதம் பாகம் -1 பக்க எண் 76

18) [20]**எஃகு காந்தச் செந்தூரம்**

அளவு : 1-2 குன்றி எடை

அனுபானம் : தேன், நெய், நோய்க்கு ஏற்ற மருந்துகள்

தீரும் நோய் : பாண்டு, சோகை, பெருவயிறு, குன்மம், செரியாமை, பெருங்கழிச்சல் தீரும். தாதுவிருத்தி, உடல் வலிமை, மனவலிமை, முயற்சி, துணிவு உண்டாகும், சயம், தீரும்.

19) [21]**திரியாக்கினி செந்தூரம்**

அளவு : 2-3 குன்றி எடை

அனுபானம் : நெய், தேன், சீனிச்சர்க்கரை

தீரும் நோய் : நீர் மேகம், நீரெரிச்சல், நீரடைப்பு, நீராமை, நீராமைகட்டி, மேகசூலை, பாண்டு, சோகை மலிந்த வாயு, மாரடைப்பு, 6வகை பெருங்கழிச்சல்

20) [22]**ஆறுமுக வடகம்**

அளவு : 1 – 1 ½ மாத்திரை

அனுபானம் : சர்க்கரை, பனைவெல்லம், வில்வாதி இளகம்,

தீரும் நோய் : பாண்டு, சோகை, பித்த வெட்டை சுவையின்மை, கக்கல், ஆட்டுமந்தம்,

21) [23]**காமாலை, சோகை, பிதத பாண்டுகளுக்கு பற்பம்**

அளவு : பணவெடை

அனுபானம் : பழமோரில்

தீரும் நோய் : காமாலை, சோகை, பாண்டு, வீக்கம், பொருமல், நீர்கட்டு

[20] அனுபவ வைத்திய நவநீதம் பாகம் -1 பக்க எண் 76

[21] அனுபவ வைத்திய நவநீதம் பாகம் -1 பக்க எண் 76

[22] அனுபவ வைத்திய நவநீதம் பாகம் -1 பக்க எண் 76

[23] அனுபவ வைத்திய முறை பாகம் -1 பக்க எண் 44

22) **பித்த பாண்டுக்கு (வேறு)**

அளவு : தேவையான அளவு

தீரும் நோய் : காமாலை, சோகை, பாண்டு, வயிற்றெடுப்பு பயித்தியம்,

அனுபவ வைத்திய முறை பாகம் -1 பக்க எண் 44

காந்தம் சேரும் பிற நோய்க்கான மருந்துகள்

1) [24]தாம்பிர காந்தச் செந்தூரம்

தக்க அனுபானம்

தீரும் நோய் : வாதத்தால் உண்டான தீராத வலிகள், பொல்லாத குன்ம ரோகங்கள், மேகவாய்வு, அண்ட வீக்கம், குடல்வாதம்.

2) [25]அயச்செந்தூரம்

அளவு : ½ காசு

அனுபானம் : தேன்

தீரும் நோய் : அசஷ்டகுன்மம், மகாரோகம், வாதபித்த கபம் ஒடிபோகும், தேகம் சிறுகி வலுவடையும்.

3) [26]பச்சை வெட்டு காந்த செந்தூரம்

தீரும் நோய் :

வாத சூலை நோய்கள், வயிற்று நோய், 8வகை குன்ம நோய்கள், குடல்வாதம், அண்டவாதம்

4) [27]பஞ்சலோக மாத்திரை

சகல ரோகம், மேக வாயு

5) [28]திரிவங்க மாத்திரை (நீரிழிவுக்கு)

அளவு : இலந்தை கொடடை அளவு

[24] யாக்கோபு வைத்திய சிந்தாமணி 700: பக்க எண் 87
[25] யாக்கோபு வைத்திய சிந்தாமணி 700: பக்க எண் 90
[26] யாக்கோபு வைத்திய சிந்தாமணி 700: பக்க எண் 177
[27] யாக்கோபு வைத்திய சிந்தாமணி 700: பக்க எண் 190
[28] யாக்கோபு வைத்திய சிந்தாமணி 700: பக்க எண் 191

தக்க அனுபானம்

தீரும் நோய் : 21 வகை மேகங்களும், கிரிச்சரங்களும் போகும்.

6) [29]அயகாந்த செந்தூரம்

எல்லா நோய்களையும் அடித்து துரத்தும் புலியாகும்.

7) [30]விசஷ்ணு சக்கர மாத்திரை

அளவு : ½ -1 மாத்திரை

அனுபானம் : தேன், தாய்பால்

தீரும் நோய் : எல்லாவித சளி, அண்டவாதம், திமிர்வாதம், இளம்பிள்ளை வாதம், பாரிசவாதம், தனுர்வாதம், செவிநோய், பீனிசம், வலிப்பு நோய்கள், சுரம், இருமல், எரிகுன்மம், குட்டம்

8) [31]சஞ்சீவி மாத்திரை

அளவு : 1 மாத்திரை

அனுபானம் : இஞ்சிசாறு, தேன், சீரக கசாயம்

தீரும் நோய் : சுரம், சன்னி, மாந்தம்

9) [32]மேகராஜாங்க ரசகஞ்சி மெழுகு

அளவு : ½ - 1 கிராம்

அனுபானம் : பால் அல்லது நீர்

தீரும் நோய் : குட்டம், திமிர், கண்டமாலை, மேகசூலை, கிரந்தி, அரையாப்பு, புற்று கரும்புள்ளி, மேக ஊறல், படர்தாமரை, தொடைவாழை, பவுத்திரம், குழிவிரணம்,

[29] யாக்கோபு வைத்திய சிந்தாமணி 700: பக்க எண் 224

[30] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 376

[31] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 76

[32] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 423

10) [33]குமட்டி மெழுகு

அளவு : 200மி.லிகி – 500 மி.லி கிராம்

காலை 1வேளை

அனுபானம் : பனைவெல்லத்துடன்

தீரும் நோய் : சூதக வாய்வு. சூதக திரட்சி, குன்மம், மகோதரம், கல்லீரல், மண்ணீரல் பெருத்தல், பீலிகம்,

11) [34]வான் மெழுகு

அளவு : 100-200மி.கி

அனுபானம் : பனைவெல்லம்

தீரும் நோய் : கபவாதசன்னி, காசம், குட்டம், குன்மம், சூதக சூலை, மகோதரம், கண்டமாலை, சூலை, பாரிச வாதம், நீரிழிவு, கிரந்தி, மாரடைப்பு, 5வகை வாத நோய்கள்:

12) [35]இராமபான இடிமருந்து

அளவு : சிறுசுண்டைக்காய் அளவு

அனுபானம் : பால் (அ) நீர்

தீரும் நோய் : யோனிப்புற்று, லிங்கபுற்று, வெடிப்புற்று, குலைப்புற்று, ஈரல்புற்று, விஷநீர் புற்று, கண்டபுற்று, புரைபோகும் புண்கள், மூக்கொழுகுதல், சூலை, குசஷ்டம், குறைரோகம், வெண்குஷ்டம், முடக்கு சூலை.

[33] 10 தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 76

[34] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 76

[35] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 434

13) [36]சடாக்ஷர அக்கினி குமார செந்தூரம்

அளவு : 100 – 200மி.கி.

அனுபானம் : திரிகடுகு ஆர், தேன்

தீரும் நோய் : வாதம்80, வாய்வு. சூலை, 8வகை குன்மம், சன்னி, முகவாதம், குமரகண்ட வலி, நெஞ்சடைப்பு. மொளிச்சூலை, கிரந்தி, அரையாப்பு.

14) [37]காந்த செந்தூரம்

அளவு : 100-200மி.கி.

அனுபானம் : நெய், தேன்

தீரும் நோய் : கிராணி சம்மந்தமான பலவகை பேதிகளை நிறுத்தும்.

15) [38]பஞ்ச பாக்ஷாண செந்தூரம்

அளவு : 50-100மி.கி

அனுபானம் : நெய், தேன்

தீரும் நோய் : சுரம், சன்னி, சூலை 18, மேகம் 20, குக்ஷ்டம் 18, வாதம்80, வெண்குக்ஷ்டம், கிராணி, குன்மம், பிளவை, கண்டமாலை, நீர்ஒழுகும் பவுத்திரம், கிரந்தி, புற்றுநோய்கள், கரப்பான், யானைத் தோலை போன்ற சர்மரோகம், புழுவெட்டு

16) [39]சடகுண செந்தூரம்

அளவு : 100 மி.கி

அனுபானம் : தேன், நெய், வெண்ணெய்

தீரும் நோய் : பேதி, கிராணி, வெட்டை, மூலம் கிரந்தி, மேக விரணம், பெரும்பாடு, பவுத்திரம்

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[36] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 443
[37] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 76
[38] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 456
[39] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 458

17) [40]மேக சிந்தாமணி செந்தூரம்

அளவு : 50-100மி.கி

அனுபானம் : நெய், வெண்ணை, பரங்கிப்பட்டை சூரணம்,

தீரும் நோய் : இரத்தத்தில் உள்ள சர்க்கரை சத்து குறையும், மேக அழலை, தாகம், வெகுமூத்திரம், நீரிழிவு, சக்தி குறைவு, மூர்ச்சை,

18) [41]பட்டுக்கருப்பு

அளவு : 50-100மி.கி

அனுபானம் : தேன்

தீரும் நோய் : சுரம், சூதகசுரம், சூதகசூலை இருதய பலவீனம்

[40] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 459
[41] தமிழக சித்த வைத்திய குருகுலம் சித்தவைத்திய பாடநூல் பக்கம் எண் 487

About the jucies used in the preparation of trial drug (Kaandha Chenduram)

பொற்றிலைக்கயான்

1. [42]வேறு பெயர்கள்:
   - கரிசனாங்கன்னி
   - கரிசாலை
   - கரியசாலை
   - கைகேசி
   - கைவீசி இலை
   - கையாந்தகரை
   - பிருங்கராஜம்
   - கரிப்பான்
   - தேகராஜம்
2. [43]**Taxonomy position according Bentham – Hooker.**

Class	-	Dicotyledons
Sub class	-	Gamopetalae
Series	-	Inferae
Order	-	Asterales
Family	-	Asteraceae
Genus	-	wedelia
Species	-	Chinensis

3. [44]**Vernacular names :**

Hindi	-	Pilambhamgara
Kan	-	Kalsaiji
Mat	-	Manmakannunni
Sans	-	Pitabhringa

[42] குணபாடம் மூலிகை வகுப்பு. பக்கம் எண். 229

[43] Taxonomy of Angiosperms page no. 123

[44] குணபாடம் மூலிகை வகுப்பு. பக்கம் எண். 229

Tam - Manjal karisalai

Guj - Bhangaru.

4. [45]வளரியல்பு :

நீலம், மஞ்சள், சிகப்பு, வெள்ளை என மேற்கூறிய நாலு இனமாக வளரும் ஒரு பூண்டினம். முதல் மூன்று வகை அநேகமாக அகப்படாது. நூான்காவதாகக் கூறிய வெள்ளைக் கரிசலாங்கண்ணி எங்கும் அகப்படக் கூடியது.

5. **[46]சுவை (Taste)** - கைப்பு (Astringent)

தன்மை (Potency) - வெப்பம் (Hot)

பிரிவு (Bio-transformation) - கார்ப்பு (Pungent)

6. [47]செய்கை :

- பித்த நீர் பெருக்கி
- உரமாக்கி
- உடற்றேற்றி
- வாந்தியுண்டாக்கி
- நீர்மலம் போக்கி
- வீக்கமுருக்கி
- ஈரல் தேற்றி

7. Phytochemicals :

- Glycosides
- Tannins
- Saponins
- Phytosterol
- Benzoforan
- Norwedelic acid

[45] குணபாடம் மூலிகை வகுப்பு. பக்கம் எண். 229

[46] குணபாடம் மூலிகை வகுப்பு. பக்கம் எண். 229

[47] குணபாடம் மூலிகை வகுப்பு. பக்கம் எண். 229

- Norwedelolactone
- Triterpenoids
- Major

(Mixture of wedelolactone and dimetyl wedelolactone). Nor- wedelic acid

The expressed Juice of herb contained.

Soluble Black Dye	-	11.2
Tannins	-	1.14
Carotene	-	1.14
Saponin	-	3.75
Phytosterol	-	3.75
Waxy compound	-	297
Resins	-	44
Gum	-	80
Total sugar	-	1040g/100g Juice.

8. Uses:

Plant is astringent, bitter, acid, anti-inflammatory, vulnerary, cardiotonic, anthelmentics, diuretics, aphrodisiac, febrifuge.

The plant is useful in vitiated conditions of kabha, elepahantiasis, otalgia, cephalgia, wounds, ulcers, hepato spleenomegaly, coliec dyspepsia, heminthiasis, strangury, Anaemia, greyness of hair.

The plant is useful in indigestion and root used in abscess.

Plant is very specific for viral hepatitis.

Leaves are regarded as tonic, alterative, useful in cough, cephalgia, disease of the skin and also it is used in dying grey hair and to promote its growth.

Leaves used in treatment of digestive system disorder.

9. [48]பயன் :

1. கரிசாலை சமூலம், உடம்புக்கு ஆரோக்கியத்தையும், பலத்தையும் தருவதுமன்றி, பித்தத்தை பேதி மூலமாக வெளிப்படுத்தும் தன்மையையும், மூத்திரப் போக்கையுண்டாக்கும் குணமும் வாய்ந்தது.
2. இதன் சாற்றை ஷயச்சுரம், காமாலை , பாண்டு, குஷ்டம், முதலிய நோய்களுக்கு கொடுப்பதுண்டு.
3. கரிசாலை சாற்றை மேலுக்குப் பூசச் சொறி சிரங்குகளின் தினவைப் போக்கும்.
4. கரிசாலை சாற்றைக் கொண்டு மை செய்து கண்ணோய்க்குப் போடலாம்.
5. கரிசாலை சாற்றை உண்ணாக்கில் தடவ கோழை வெளிப்படும்.
6. கரிசாலை சாற்றை தலையில் தேய்த்து முழுகத் தலைவலி, பீனிசம் , கபால நோய், கண் எரிச்சல் தீரும்.

10. [49]அயபிருங்கராஜ கற்பம் :

அளவு : 500 மி.கி, 2 வேளை, 40 நாட்கள்

அனுபானம் : தேன், நெய், பழச்சாறு, தயிர்

தீரும் நோய் : நரை, அசதி, இரத்தக்குறைவு.

[48] சாம்பசிவப் பிள்ளை மருத்துவ அகராதி Vol - II Part - I. பக்க எண். - 324

[49] சிறப்பு மருத்துவம். பக்கம் எண். 21

சோற்றுக்கற்றாழை

1. [50]வேறு பெயர்

   கன்னி

   குமரி

2. [51]**Taxonomy position according Bentham – Hooker Classification**

Class	-	Monocotyledons
Series	-	Coronarieae
Family	-	Liliaceae
Genus	-	Aloe
Species	-	Vera

3. [52]**Vernacular Names :**

Bengali	-	Ghrita kumari
English	-	Indian aloe
Gujarat	-	Kadvi kumari
Hindi	-	Ghee – Banwar, Gwarpatha
Kannada	-	Komarka
Malayalam	-	Kattavazha
Sans	-	Kumari
Tamil	-	Sottru – Katrazhae.

4. [53]பயன்படும் உறுப்பு :

   பால், மடற்சோறு, சாறு, வேர்

5. [54]சுவை (Taste) - சிறுகைப்பு (Slightly bitter)

   தன்மை (Potency) - தட்பம் (Coolant)

   பிரிவு (Bio-Transformation) - இனிப்பு (Sweet)

[50] குணபாடம் மூலிகை வகுப்பு. பக்கம் எண். 230

[51] Taxonomy of Angiosperms page no. 123

[52] குணபாடம் மூலிகை வகுப்பு. பக்கம் எண். 270

[53] குணபாடம் மூலிகை வகுப்பு. பக்கம் எண். 230

[54] குணபாடம் மூலிகை வகுப்பு. பக்கம் எண். 230

6. [55]செய்கை :

- உரமாக்கி
- உடற்றேற்றி
- நீர்மலம் போக்கி
- ருது உண்டாக்கி

7. Phytochemicals :

The mucilaginous jelly (gel) isolated from the fresh leaves contains

- Amino acids
- Arginine
- Histidine
- Phenyalanine
- Leucine
- Valine
- Isoleucine
- Polysaccharides

8. [56]Uses :

1. Extract of leaves is used for treating obstruction of Lymphatic system, arthritis and myopathies.
2. Juice of leaves is reported to be used for treating gonorrhoea and the pulp in menstrual suppression.
3. The pulp is also used as vermicide.
4. The phenolic and non – phenolic fractions of the leaf extract showed antimicrobial activity comparable to standard antibiotics such as neomycin, tetracycline, and co – trimazole.
5. The pulp is mixed with misri and taken for stomach disorders.

[55] குணபாடம் மூலிகை வகுப்பு. பக்கம் எண். 230

[56] Wealth of India, Vol – I, Page No. 45

6. In uttar pradesh, crushed leaves are applied on forehead for relief in headache.
7. Experiments have revealed that zine acetate and lyophilized aloe at conc of 75% and 10% can be used as effective and safe vaginal contraceptive by humans.

9. [57]பயன் :

1) கற்றாழை இளமடலுடன் சீரகம், கற்கண்டு சேர்த்தரைத்து குருதியும் சீதமும் கலந்த கழிச்சலுக்குக் கொடுக்கலாம்.
2) கற்றாழையின் சோற்றை எடுத்துப் பலமுறை கழுவி, இதில்சிறிது படிகாரம் அல்லது சீனாகற்கண்டு சேர்த்து, சிறு துண்டில் முடிந்து தொங்கவிட நீர்வடியும். இதைக் கண்களில் விட கண்ணோய், கண் சிகப்பு, கண்ணருகல் முதலியன தீரும்.
3) கற்றாழை சாறு வெப்பத்தைத் தனிப்பதற்காகும். பற்பச் செந்தூரங்களுக்கு துணை கொள்ளலாம்.
4) கற்றாழை சாற்றை வெதுப்பி மாந்த நோய்களுக்கும், ஊழியால் காணும் நீர் வேட்கைக்கும் கொடுக்கலாம்.
5) கற்றாழை சாற்றை தாபிதங்களுக்கும் வீக்கங்களுக்கும் பூசலாம்.

[57] குணப்பாடம் மூலிகை வகுப்பு பக்கம் எண் 271

அரசு

1. [58]வேறு பெயர்கள் :

- அஸ்வத்தம்
- அச்சுவத்தம்
- திருமரம்
- கவலை
- பேதி
- பணை
- கணவம்
- சராசனம்
- பிப்பிலம்

2. [59]**Taxonomy position according Bentham – Hooker Classification**

Class	-	Dicotyledons
Series	-	Unisexuales
Family	-	Moraceae
Genus	-	Ficus
Species	-	Religiosa

3. **Vernacular Name :**

Bengali	-	Ashathwa
English	-	Peepul tree
Kannada	-	Pinpala
Malayalam	-	Arasu
Sans	-	Aswdtha
Tamil	-	Arasu
Telgu	-	Ravichettu
Uru	-	Peepul Paras

[58] குணப்பாடம் மூலிகை வகுப்பு பக்கம் எண் 271

[59] Taxonomy of Angiosperms page no. 196

Duk - Anipeepul

4. ப.உ. - இலை, வித்து, பட்டை, வேர்

5. சுவை (Taste) - துவர்ப்பும் கைப்புமுள்ளது (Astringent bitter)

தன்மை (Potency) - தட்பம் (Coolant)

பிரிவு (Bio-Transformation) - இனிப்பு (Sweet)

6. [60]**செய்கை:**

இலை, வேர், பட்டை - துவர்ப்பி

7. [61]**Bark – Phytochemical**

Tannin

8. **Uses** :

1) The decoction of the stem bark with molasses is given in haematuria.
2) Infusion of bark is taken internally for scabies and its powder is applied over severe body burns after application of coconut oil.
3) The benzene extract of stem bark exhibited anti- bacterial activity against staphylococcus areus and Escherichia coli and anti fungal activity against pencilium glacum due to presence of furanocoumarins, bergapten and bergaptol.
4) The tree is suitable for planting a near petrochemical and thermal power station to purify air by absorbing gaseous pollutants.

9. [62]**பயன் :**

1. பட்டையை இடித்துப் பொடியாக்கி கருக்கிய சாம்பலில் கொஞ்சம் எடுத்து நீரில் ஊற வைத்து வடிகட்டி கொடுக்க விக்கல் போகும்.

[60] 3,4,5,6 குணப்பாடம் மூலிகை வகுப்பு பக்கம் எண் 34
[61] 7,8 - Wealth of India Vol – I Page No. 370.
[62] குணப்பாடம் மூலிகை வகுப்பு பக்கம் எண்.35.

2. பட்டைத்தூளில் கால் முதல் அரை பலம் எடுத்து குடிநீர் செய்து கொடுக்க சொறி, சிரங்குகள் குணமாகும். வெப்பம் அகலும்.
3. பட்டையின் நுண்ணிய தூள்களை புண்ணின் மீது தூவி வர புண் ஆறி வரும்.
4. ஐந்து துவர்ப்பு பொருட்களில் அரசும் ஒன்று. ஆகையால், இவ்வைந்து பட்டைகளின் குடிநீரை, வாய்ப்புண்ணுக்கு கொப்பளிக்கும் நீராகவும், வெள்ளையின் நீர்த்தாரை வழியாக செலுத்தி கழுவும் நீராகவும் பயன்படுத்தலாம்.

எலுமிச்சை

1. [63]வேறு பெயர் :
   - தேசி நீர்
   - கூதழ்ச் சாறு
   - சிறுகிளி பழச் சாறு
   - நிம்பவளச் சாறு
   - நோவாலி மாதரசி
   - உபனோரஞ்சகம்
   - பித்த முறிமாதர்
   - பேசும்கனிமாதர்

2. **Vernacular Name :**

Sans	-	Jambha
Eng	-	Acid lime
Hindi	-	Ninbu Limu
Punj & Guj	-	Limbu
Mah	-	Kagdi Limbu
Tel	-	Nimma
Tam	-	Elumichai
Mal	-	Cheru- Naranga

3. [64]பயன்படும் உறுப்பு:

   இலை, காய், பழம், பழரசம், எண்ணெய்.

4. காய், பழம் :

சுவை (Taste)	-	புளிப்பு (Sour)
தன்மை (Potency)	-	வெப்பம் (Hot)
பிரிவு (Bio-transformation)	-	கார்ப்பு (Pungent)

[63] பஞ்ச காவிய நிகண்டு, பாடல் 493 பக்கம் 202

[64] (3,4,5,6) T.V.சாம்பசிவம் பிள்ளை அகராதி பாகம் - 1 பக்கம் எண்.1446

5. செய்கை :

குளிர்ச்சியுண்டாக்கி

6. வழக்கு :

- ✓ பித்தத்தை சாந்தி பண்ணுவதுடன் வாந்தியை நிறுத்தும். அன்றியும், என்புருக்கி கணரோகம், விஷசுரம் முதலியன போம்.
- ✓ நமது நாட்டு வைத்தியர்கள் மருந்துகள் அரைப்பதற்கு அனுபானமாகவும் சரக்குகளை சுத்தி செய்வதற்கும், சில புண்களை கழுவவும் இதை உபயோகப்படுத்துவார்கள்.
- ✓ உடம்பில் பலவித கிருமிகளை அழித்து உடம்பிற்கு வலுவைக் கொடுக்கும்.
- ✓ நேர்வாளம், ஆமணக்கு முதலியவைகளின் விஷங்களை இது முறிக்கும்.
- ✓ இதன் சாற்றுடன் தேன் கலந்து கொடுக்க தாதுவுக்கு வலுவை தரும்.
- ✓ நகச்சுற்றுக்கு இதன் பழத்தை வைத்து கட்ட அல்லது சொருகி வைத்து கட்ட குணம் உண்டாகும்.

7. [65]Phytochemicals :

Lemon juice contains citric acid 7-10pc, phosphoric acid, malic acid, also citrate of potassium and other bases.

8. Uses :

- ❖ A few drops of fresh lemon juice put early morning into the eye when cataract is forming in the eyes of old men nearing 70 years, is said to gradually dissolve the cataract and make the eye light cleared day by day.
- ❖ Juice of the fruit in doses of four to six drachms is employed as a very useful refrigerant drink in small pox, measles, scarlating and other forms of fever.
- ❖ It is also useful in the rheumatism.

[65] 7,8 Indian Materia medica by Nadkarni. Page: No: 346

BOTANICAL ASPECT

SYZYGIUM CUMINI (Linn)

TAXONOMY CLASSIFICATION:

Kingdom	:	Plant Kingdom
Division	:	Angiosperms
Class	:	Dicotyledonae
Sub Class	:	Polypetalae
Series	:	Calyciflorae
Order	:	Myrtales
Family	:	Myrtaceae
Genus	:	Syzygium
Species	:	Cumini

[66]Distribution:

Throughout India, in forests upto 1800m usually along river banks and moists localities; also cultivated as shade trees along roadsides.

[67]Botanical Description:

A large or Medium sized evergreen tree.

[66] Indian Medicinal Plants a compendium of 500 species, Volume – 5, Page No: 225
[67] Database on Medicinal plants, Page No: 314

CHEMICAL ASPECT

CHEMICAL CONSTITUENTS:

Stem bark:

Betulinic acid, friedelin, friedelinol, kaempferol and its 3-0 glucoside, quercetin, sitosterol and its glucoside and sucrose, tannins, gallic acid,ellagic acid.

GUNAPADAM ASPECT

வேறுபெயர்:

நவ்வல், நம்பு, சம்பு, சாதவம், ஆருகதம், நேரேடு, நேரேடம், சாட்டுவலம், சாம்பல், சுரபிபத்திரை.

VERNACULAR NAMES:

Eng - Jaman, Jambolan, Black plum

Hindi - Jamun, Jambhal, Jaman, Bada Jamun, Jam.

Beng - Jam, Kalajam

Guj - Jambu, Jamli

Kan - Neralu, Jambuva

Mal - Naval, Perinnaral

வளரிடம்:

இம்மரம், நம் நாடு முழுமையும் வளருகின்றது.

பயன்படும் உறுப்பு:

அனைத்து உறுப்புகளும்.

ORGANOLEPTIC CHARACTERS:

சுவை (Taste) : துவர்ப்பு

தன்மை (Potence) : தட்பம்

பிரிவு (Therapeutic Actions) : கார்ப்பு

செய்கை:

துவர்ப்பி (Astringent)

[68]பட்டை குணம்:

"ஆசியநோய் காசம் அசிர்க்கரஞ்சு வாசவினை
கேசமுறு பால கிரகநோய் - பேசரிய
மாவியங்க லாஞ்சனமிவ் வன்பிணியெ லாமேகும்
நாவலுறு பட்டையத னால்"

பட்டையினால் வாயிற்பிறக்கும் நோய்கள், இருமல், பெரும்பாடு, ஈளை, குழந்தைகளுக்குண்டாகும் புள் முதலிய குற்றம் (தோடம்).

மருத்துவப் பயன்கள்:

[69]"பட்டையினி லூட்டிப் படிகார மிந்துப்பு
எட்டிரட்டி யாகவரைத் துண்டை செய்து - ரெட்டைப்
பிரமிரசந் தேனைப் பெரும்பாடு போகும்
வருடையதி ரத்தைநா வல்"

பொருள்:

நாவற் பட்டைக்குக் குறும்பாட்டின் குருதியை விட்டு ஊற வைத்து எட்டுப்பங்கு கொண்டு, அத்துடன் படிகாரம், இந்துப்பு இரண்டு பங்கு கூட்டி அரைத்து, உருண்டை செய்து, இரட்டைப் பிரமிச்சாறும் தேனும் சேர்த்துத்தரின் பெரும்பாடு என்னும் நோய் போம்.

[70]இதை முறைப்படி குடிநீர் செய்து உட்கொள்ள நீரிழிவு, கழிச்சல் வகை போம். வாய்ப் புண்ணுக்கும், இதைக் கொண்டு வாய் கொப்புளிக்க உலரும்.

இதை அரைத்து, அடிபட்ட வீக்கம், கட்டி முதலியவற்றின் மேற்போட அவை அமுங்கும்.

இதன் சாற்றைப் பெரும்பாட்டுக்கு வழங்கலாம்.

இதுவே எட்டி நஞ்சுக்கு மாற்றாகும்.

இதன் பட்டைச் சாற்றினால் இரும்பு செந்தூரமாகும்.

இதனால் கடுவன், கரப்பான், மாந்தம் இவை உண்டாம். நீரிழிவு, வெப்பம், வாயு, கடுப்பு, நீர்வேட்கை இவைகள் நீங்கும்.

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[68] அகத்தியர் குணவாகடம்
[69] தேரன் வெண்பா
[70] குணபாடம் மூலிகை வகுப்பு, பக்க எண் - 572

[71]பட்டையை சூரணித்தாவது, குடிநீரிட்டாவது அருந்திவர சீதபேதி, இரத்தபேதி, பெரும்பாடு முதலிய குணமாகும்.

Uses:

1. [72]The bark dried in the shade and powdered and mixed in goat's milk is prescribed for diarrhoea, chronic dysentery, hemorrhoid etc.
2. The powder when dusted over bleeding wounds arrests the bleeding and heals the wound.

[73]The bark is astringent, sweet, sour acrid, refrigerant, carminative, diuretic, digestive, anthelmintic, febrifuge, constipating, stomachic and antibacterial. It is useful in diabetes, leucorrhoea, stomachalgia, fever, gastropathy, strangury and dermatopathy.

[74]The bark is astringent and is used in the preparation of gargles and mouth washes.

[71] அனுபவ வைத்திய தேவ ரகசியம், பக்க எண் - 59
[72] டி.வி. சாம்பசிவம் பிள்ளை தமிழ், ஆங்கில அகராதி, பக்க எண் - 2960
[73] Indian Medicinal Plants – a compendium of 500 species, Volume – V, Page No: 225
[74] Wealth of India, Volume – X, Page No: 100

[75]வெளுப்பு நோய்

வேறுபெயர் : வெண்மை நோய், பாண்டு.

இயல்பு :

இயற்கை நிறமாறி, உடல் வெளுத்து, கண்ணையும் நகக் கண்ணையும் நீக்கிப் பார்க்கின் குருதியின்றி வெளுத்திருக்கும்.

நோய் தோன்றும் வழி :

குருதியின் வன்மையைக் குறைக்கக் கூடிய உப்பு, புளிப்புள்ள பொருள்களை மிகுதியாகக் கொள்வதாலும் சுரம், பேத, வாந்தி, கீல்வாயு முதலிய நோய்களுக்குட்படுதலாலும் குருதியை அளவு கடந்து வெளியாக்கும் பெரும்பாடு, குருதியழல் நோய், குருதிக்கழிச்சல், முளைநோய் (மூலம்), குருதிவாந்தி முதலியவை ஏற்படுதலாலும்இ வெட்டுப்பட்டு மிகுதியாகக் குருதி வெளிப்படுதலாலும் இந்நோய் உண்டாம். அன்றியும், நச்சுத்தன்மையுடைய மருந்துகளை நாளளவுக்கு மிஞ்சி உண்பதாலும், உடலை இளைக்கச்செய்யும் வயிற்றுப்புழு நோய், இளைப்பு நோய், நிணக் கழிச்சல் முதலியவைகளாலும், குருதிப் பெருக்கைக் கெடுக்கக்கூடிய ஈரல் நோய்களாலும், புகையிலை, வெற்றிலைப் பாக்கு, மண், சாம்பல், திருநீறு, கற்பூரம் முதலியவைகளை அடிக்கடி கொள்வதாலும் இந்நோய் வரும்.

முற்குறிகள் :

உணவு முதலிய வேறுபாடுகளால், தீக்குற்ற மிகுந்து, குருதியின் நிறத்தையும் எடையையும் கெடுத்து, உடற்கு வேண்டிய ஊட்டத்தையும் கொடாமல், உடலை வெளுக்கச் செய்யும். பின்பு, சிறிது தொலைவு நடக்கினும் கால் ஓய்ந்து போதல், பெருமூச்சு வாங்கல், உணவில் விருப்பமின்மை, வாய்குமட்டல், தலைசுற்றல், கண் இருளல், அடிக்கடி மயக்கமாதல், மார்பு துடித்தல், உடல் இளைத்தல் ஆகிய குறிகளையும் காட்டும்.

[75] Siddha Maruthuvam (Pothu) Pg 345

நோய் எண் :

குற்றத்தால் வருவன நான்கும், நஞ்சால்வருவன ஒன்றும் கூடி ஐந்தாகும். 1. வளி (வாதப்) பாண்டு, 2. தீ (பித்தப்) பாண்டு, 3. ஐய (கபப்) பாண்டு, 4. முக்குற்றப் (திரிதோஷ) பாண்டு, 5. நஞ்சு (விட)ப் பாண்டு என ஐந்தென வகுத்துள்ளார். இன்னும், மண்ணுண் வெளுப்பு (பாண்டு) நோய் ஒன்றுளது என்றும் சிலர் கூறுவர். அன்றியும், குருதிக் குறைவால், உடற்கட்டுகள் மெலிந்து, உடல் வீங்கி, நிறமாறி மஞ்சள் அல்லது நீலநிறம் பெற்று, மிகுந்த நீர்வேட்கை, அடிக்கடி மயக்கம் வருதல், மனச்சோர்வடைதல், அறிவு தடுமாறல், ஆண்மை குறைதல் என்னும் குறிகளையும் காட்டும். இந்நோயினை, நீலப்பாண்டு, அலசப்பாண்டு, அலிமுகப் பாண்டு என மூவகையாக வழங்குவாராயினும், இவை வெளுப்பு (பாண்டு) நோயில் காணும் குறிகுணங்களையே பெறுமாதலின் இவற்றைத் தனித்து கூறவேண்டுவதில்லை.

தீரும் தீராதவை :

இந்நோயில், இடைவிடாத வாந்தி அல்லது கழிச்சல் உண்டாயினும், உடல் மிகுதியாக வீங்கல் (சோகம்). நீர் வேட்கை, விக்கல், இருமல் என்னும் குறிகள் ஏற்படினும் இஃது எளிதில் தீராததாகும், அன்றியும் நஞ்சால் பிறந்த வெளுப்பு நோயும் எளிதில் தீராதாம்.

பொதுக் குறி குணங்கள் :

இந்நோயில், உடல் வன்மை நாளுக்கு நாள் குறைந்து நடக்க இயலாமை, தலைநோதல், மார்பு துடித்தல், கண் அடிக்கடி இருளல், தலைசுற்றல், மயக்கமுண்டாதல், மூச்சுத் தடுமாறல், பசித்தீக் கெடல், உணவு வேண்டாமை, உண்ட சிறு உணவும் வாந்தியாதல் ஆகிய குறிகள் தோன்றும், இன்னும் மிகவும் வெளுத்துத் தோல் சுருங்கல், உடல் மெலிந்து பளபளத்து வெளுப்பாதல், நகக் கண்கள் தடித்து வெளுத்தல், நாவெடித்துப் புண்ணாதல் அல்லது நாவின் மேல் தோலைச் சீவியெடுத்தது போன்று சிவந்து காணுதல், அல்லது நாக்குப்

பட்டுத்துணிபோல் வழுவழுத்து வெளுத்துக் காணல், தொண்டை கட்டல் என்னுங் குறிகளும் காணும்.

இந்நோய், பெண்களுக்குண்டாயின், சூதகத்தில் வெளியாகும் குருதி, தன்னிறம், எடை, அளவு முதலியன குறைந்து வெளியாகும், சிலருக்கு அளவு கடந்து வெளியாகும். குழந்தைகளுக்கும் பெரியவர்களுக்கு முண்டாகும் வயிற்றுப்புழு நோய், குருதியழல் நோய் ஆகியவற்றிற்கும் இந்நோய் துணைநோயாக அமையும். அழல் உடலோர்க்கு இந்நோய் பிறக்குமாயின், முதலில் பசித்தீயைக் கெடுத்து, உண்ட உணவு செரியாமை, உடல் எரிச்சல், சுரம் உள்ளது போன்று வெப்புத் தோன்றல், நாவெளுத்துச் சிவத்தல், அல்லது பட்டுத் துணி போல் வழுவழுத்தல், உணவை மெல்லவும் விழுங்கவும் முடியாமை சிறிது பித்த நீர் கலந்து அடிக்கடி வாந்தியாதல், வாய்க்கைப்பு, வயிற்று நோய், வயிறு கடுத்து நுரைநுரையாகக் கழிதல் என்னுங் குறிகள் உண்டாகும்.

இவை நாளுக்குநாள் மிகுந்து கொண்டே வருமாயின் உடலின் குருதியின் அளவு, எடை, நிறம் யாவும் குறைந்து, உடல் மஞ்சள் பூத்தது போன்றாகி மஞ்சள் (காமாலை) நோயினைப் போலக்காணப்படும். நோய் பெருகிய நிலையில், ஆயாசம், இளைப்பு, பெருமூச்சு, பெருங்கழிச்சல், உணவை வெறுத்தல், வன்மை இழத்தல், உடல் ஊதல் என்னுங் கொடியதான குறிகுணங்களும் தொடரும்.

குற்றம் முதலிய வேறுபாடுகள் :

முன்பு நோய் வருவழியில் கூறியவாறு, உடல் வன்மை குறைந்து பசித்தீ கேடடைந்து, உண்ட உணவு சரியாகச் செரியாமற் போகும். உணவின் கேட்டால் இரச குருதிகளுக்கு ஊட்டம் பெறா. அதனால் அவைகளுக்கு தோலுக்கு நிறத்தைக் கொடுக்கும் அழல் (இரஞ்சித பித்தமும்) மெலிந்து, நிறத்திலும் எடையிலும் குறைந்து, தீக்குற்றத்தைப் பெருக்கம். அதனளவாக மற்றைய குற்றங்களும் தன்னிலையில் திரிந்து, பரவுகாலின் வன்மையைக் கெடுத்து நோயை உண்டாக்கும். நோயின் வன்மை பெருகப் பெருக, ஐயமும் பெருகி வீக்கம் முதலியவைகளையும் துணைகொள்ளச் செய்யும்.

MODER ASPECT OF DISEASE

ANAEMIA

Other names:

- Iron poor blood
- Low blood
- Tired blood.

Definition:

Ancient Greek meaning “without blood”.Anaemia refers to a state in which the level of hemoglobin in the blood is below the normal range appropriate for age and sex .It is also defined as a qualitative or quantitative deficiency of hemoglobin, a molecule found inside red blood cells.

Since hemoglobin normally carries oxygen from the lungs to the tissues, Anaemia leads to hypoxia (lack of oxygen) in organs. Since all human cells depend on oxygen for survival, varying Anaemia is also caused by a lack of iron in the body.

The clinical features of Anaemia reflect diminished oxygen supply to the tissues and depend upon the degree of anaemia, the rapidity of its development and the presence of cardio respiratory disease.

Anemic ranges of hemoglobin:

- Adult men: < 13.0
- Non pregnant women: < 12.0
- Pregnant women: < 11.0

Grading of Anaemia:

WHO grades Anaemia according to hemoglobin level as follows,

- Hb between 10 gm and cut off point for age -Mild
- Hb between 7 to 10 gm -Moderate
- Hb under 7 gm -Severe
- Hb under 5 gm -Very severe.

Classification of anaemia:

1. Morphological classification
   - Normocytic Anaemia
   - Microcytic Anaemia
   - Macrocytic Anaemia
2. Pathological classification
   - Anaemia due to blood loss
   - Anaemia due to impaired red cell production
   - Anaemia due to increased cell destruction

Causes of Anaemia:

- Lack of iron, it B12 and folate
- Hypoplasia
- Invasion by malignant cells
- Blood loss
- Hemoglobin
- Hypersplenism
- The three main causes are
- Heavy blood loss
- Lack of RBC production
- High rates of RBC destruction.

IRON DEFICIENCY ANAEMIA

Iron deficiency Anaemia is the most common and widespread nutritional disorder in the world. The numbers are staggering; 2 billion people over 30% of the world's population are anaemic, many due to iron deficiency.

Structure of the red corpuscles in IDA:

In Iron deficiency anaemia, the red blood corpuscles are decreased or normal in the number and hemoglobin content of the red blood corpuscles is reduced. In the blood smear, the red cells appear pale with a large central pale area and many of the RBC appears to be smaller than the normal. This type of Anaemia is called "Hypo chromic and Microcytic Anaemia".

Etiological factors:

1. Increased physiological requirements
2. Decreased iron stores
3. Decreased iron assimilation
4. Blood loss
5. Increased demands.

Pathogenesis:

IDA develops when the supply of iron to the bone marrow is insufficient for the requirements of hemoglobin synthesis. It has been pointed out that the body is normally in a state of positive iron balance. When a negative balance occurs due to blood loss, increased requirements or impaired absorption, the deficit is made good by iron mobilized from the tissue stores and an adequate supply of iron for hemoglobin formation is maintained. It is only when the tissue stores are exhausted and the supply of iron to the marrow for hemoglobin synthesis becomes inadequate, hypochromic Anaemia develops.

Stage of iron deficiency Anaemia:

1. Storage iron depletion

Iron reserve is small or absent and is characterized by reduced serum ferritin or reduced iron concentration in marrow and liver tissue .Hemoglobin serum iron, transferritin concentration and saturation are within normal limits.

2. Iron limited erythropoiesis

Hb may still be normal but serum iron is low and TIBC increased with a low serum ferritin and raised free erythrocyte protoporphyrin (FEP).

3. Iron deficiency Anaemia

The flow of iron to erythroid marrow is impaired to cause reduction in hemoglobin concentration with a progressive microcytic hypo chromic Anaemia associated with the reduced serum iron, transferrin saturation and serum ferritin level.

Symptoms and Signs

- Pallor of the skin, mucous membrane, palms, nails and conjunctiva.
- Weakness, Dizziness
- Headache, Giddiness
- Breathlessness, Tachycardia
- Loss of appetite, Constipation
- Angular stomatitis, Glossitis
- Pica.

Complications:

Iron deficiency Anaemia may be the present finding in gastrointestinal cancer.

In patients with heart disease severe Anaemia may precipitate angina pectoris or congestive heart failure.

Infections are common in IDA, especially those of the respiratory, gastrointestinal and urinary tracts.

Investigation:

Hemoglobin level

Heamatocrit values (PCV, MCV, and MCHC)

Blood smear study

Iron binding capacity

Serum ferritin

Serum iron

Fecal occult blood test if present any gastro intestinal disorders.

Prevention:

- Cow's milk consumption
- Iron fortified cereal and formulas
- Well balanced diet.
- Good choices include iron fortified grains and cereals, red meat, egg yolk, leafy green vegetables, yellow vegetables and fruits.

IRON Metabolism:

Absorption of iron takes place from almost all parts of the small intestine by the following mechanism. A substance called apotransferrin secreted by the liver flows in the duodenum. There it binds with free iron and iron compound haemoslobin and myoglobin to from transferrin. Transferrin binds with receptors of intestinal epithelial cells. Now transferring molecule carrying iron is absorbed into the epithelial cells and released in the form of plasma transferrin. Ascorbic acid, citric acid, amino acids, and sugars in the diet enhance absorption of iron.

Storage of excessive iron in the blood is deposited in all cells especially in the liver Hepatocytes. A smaller amount being stored in reticuoendothelial cells of the bone marrow. In the cell cytoplasm it

combines with apoferritin to form ferritin. This iron stored as ferretin is called storage iron some iron is stored in as soluble form haemosiderin.

The subsequent stages of Fe(iron) absorption are outlined below.

- Ferrous iron Oxidised Ferric Hydroxide (enter mucosa)
- Ferric Hydroxide combines with protein (Apoferritin – unstable) Ferritin (Stable)

Normally, the total body iron is divided into functional and storage comportments approximately 80% of the functional from is found in Haemoglobin.

Liver, spleen kidneys (Storage Fe)	RBC (Hb Fe)	Liver, spleen kidneys (Storage Fe)	Cellos (parenchymal Fe)
Ferritin and Hemosiderin from break down, of RBC	Transport iron in plasma attached to protein siderophilin level reflects storage Fe	7%	Essential Fe for all cells not available for the Hb combination
20%	58%		15%

IRON STORAGE:

Tissue stores provide a buffer for events that upset the balance of iron turnover between the erythron and macrophages when the rate of red cells production exceeds the rate of destruction (Such as occurs following acute blood loss) iron is mobilized from stores to satisfy the needs of an expanded erythroid effort. When red cell destruction exceeds production surplus iron is diverted to stores for later use. Tissue stores of iron exist in two related forms. The soluble, readily available storage fraction is

known as ferritin, the insoluable more stable fraction is known as hemosiderin.

The lost of Iron from the Body

- ❖ Mainly iron is lost from the body by Desquamation
- ❖ Excessive sweating.
- ❖ About 1 mg of iron is excreted through faeces each day.
- ❖ Whenever bleeding occurs additional quantity of iron is lost.
- ❖ In women, about 20 mg iron per period is lost during menstrual cycle.

Table : Spectrum of Body Iron Content

State of iron	**Stored iron**	**Transport iron**	**Functional**
Iron-Deficiency Anaemia	Low	Low	Low
Iron-Deficient Erythro poiests	Low	Low	Low
Iron depletion	Low	Low	Low
Normal	Normal	Normal	Normal
Iron overload	High	High	Normal

Pharmacological Aspect:

1) Prophylatic in pregnancy, infancy and childhood, in menstruation women in professional blood donars and following gastrectomy.
2) Therapeutic, in cases of iron deficient intake or decrese absorption.
   (a) Nutritional deticiency due to defiency intake (or) decrease absorption
   (b) Anaemia of pregnancy and infancy
   (c) Anaemia due to acute (or) chronic blood loss.

During pregnancy, women should receive oral iron supplement (equivalent to 100mgm of elemental iron daily), prophylactically from the four month onwards and this should be continued during the lactation period.

Prophylactic iron theraphy is also advocated for infants and children more so in those with low birth weights. The average dily dose ferrous sulphate in the form of syrup (or) paediatric drop varies from 100 to 200mg.

Professional blood donors should receive routinely 300mg. ferrous sulphate daily to one months after each donation of 500mg.

Following oral iron, normal, hemoglobin level is usually attained within 1-3 months depending mainly on the initial hemoglobin level. It is important however to continue with the therapy for 12-20 weeks after the hemoglobin level has returned to normal in order to replenish the depleted iron stores.

The response of patient with iron deficiency anaemia to iron therapy is quite predictable. The response to oral iron considered satisfactory when the hemoglobin level increases by about 1 percent (Sahli's method) per day with rise of atleast 10 percent (1.5g/100 mg of blood) with three weeks mos patients respond to oral therapy satisfactorily if iron is taken regularly and it is absorbed. Failure of a patient to respond to adequate oral iron therapy may be due to.

1. Incorrect diagnosis
2. Uncooperative patient who does not take the medication regularly
3. Continued blood loss at a rate greater than that of regeneration.
4. Super imposed infection, malignancy, inflammation (or) Uraemia which reduced from utilization.
5. Defective absorption of iron from the gastro intestional treat.

The pharamacopoeial preparation of iron salts, which are largely used in medicine are mostly prepared from sulphate, carbonate and perchloride of iron. When these salts are administered in large doses they produce poisonous symptoms and may even cause exogenous haemosiderosis as a manifestation of chronic poisoining.

1) Iron Sulphate (Ferrous Sulphate) – $FeSo_4$ $7H_2O$

Iron Sulphate is commercially known as green vitriol of copper. It forms green monosymmetric crystals effloresc ing on exposure to the atmosphere. It is freely soluble in water. It is used in making blue black ink and dyes.

2) Perchloride or iron (Ferric Chloride) – $FeCl_6$ $12H_2O$

Perchloride of iron is an extremely deliquescent salt, rapidly soluble in water. Locally, it is a powerful irritant, when its watery solution is slowly evaporated, below crystals are formed. When dissolved in alcohol, it forms a non-official preparation called tinctora ferri per chloride (tincture of iron)

Evaluation of Toxic History:

Dose of element iron ingested product name (or) preparation type helpful it's not the total mg of iron salt but rather the amount of elemental iron ingested that determines toxicity, predicted toxicity of calculated iron load by history. Time since ingestion, history of emesis and if so how many times.

This is a key element of the history.

Mg/kg toxicity

< 20 mg/kg	-	non-toxic
20 – 60 mg/kg	-	mild to moderate toxicity
>6mg/kg	-	severe toxicity

Iron Toxic Effects:

1) Direct mucosal cell necrosis
2) Impairs capillary permeability
3) Binds/alters lipid membrane of mitochondria
4) Inhibits kreb's cycle, anaerobic metabolism
5) Acts as an electorn sink
6) Un couples oxidative phosphorylation

7) Direct vaso dilator
8) Free ferric irons are cellular toxic.

MATERIALS AND METHODS

In this dissertation the **Kaandha Chenduram** was taken as a compound during study. This drug was prepared as per the specification given in **Kannusamy Parambarai Vaithiyam Page No.:316**

Collection of the test drug

Kaantham was bought from a raw drug store at Tirunelveli. Karisalai and Lemon was bought from Palayamkottai market. Arasampattai and Sottru Katrazhai was collected from Goverment Siddha Medical College campur. Naaval Pattai was collected around the Vannarpettai area, Palayamkottai. The above drugs were identified by Gunapadam and Medicinal Botany Department Staff.

Purification of the Drug:

Kaandham pieces was heated with the help of blower. After heating kaandham pieces was soaked in cow's urine. This process of purification was repeated for 7 times. Then purified kaandham was made into fine mortor by using stone mortar.

Process:

Ingredients:

Kaandham (purified magnetic oxide of Iron).

Manjal Karisalai Juice (Juice of Eclipta Prostrata).

Sottru Katrazhai Juice (Juice of Aloe vera).

Naval Pattai Juice (Juice of Syzygirm cumini bark).

Arasam Pattai Juice (Juice of Ficus religiosa).

Elumicham Pazham Juice (Juice of citrus medica).

Purified kaandham was ground by using Manjal Karisalai juice for 4 Saamam (**12 hrs)**. Made into villais and dried. The villais was placed in a mud Pan, covered by using another mud Pan and scaled with day and then allowed to dry in sunlight and subjected to putam. The seal was removed on next day and the subjected kaandham was again ground

using the same Manjal Karisalai Juice but the grinding tune is only for about 3 saamam **(9 hrs.).**

The above said process was repeated using the following saaru respectively.

1) Sottru Katrazhai Saaru
2) Naaval Pattai Saaru
3) Arasam Pattai Saaru
4) Elumicham Pazham Saaru

After all the above process was completed by using all Juices. The seal was removed and the villai was powdered pressured in an airtight container.

Dose:

100 mg. along with honey twice a day after food.

Rate of administration:

Enteral dose

Indication:

Paandu

Thus prepared Kaandha chendhuram was used for the treatment of Paandu and analysed by the following methods:

- Biochemical analysis
- Pharmacological analysis
- Heavy metal analysis
- Qualitative and Quantitative chemical analysis
- Microbiological analysis
- Clinical assesments
- Bio stastical analysis

PHYSICO-CHEMICAL STANDARDIZATION

The standardization parameters of Kaandha Chenduram was done at Sastra universityThanjavur.

The tests done are as follows.

pH at 10% of aqueous solution:

Five grams of Kaandha Chenduram is weighed accurately and placed in clear 100 ml beaker. Then 50 ml of distilled water is added to it and dissolved well. Wait for 30 minutes and then apply in to pH meter at standard buffer solution of 4.0, 7.0 and 9.2

Loss on drying@ 105^0 C:

Five gram of Kaandha Chenduram is heated in a hot oven at 1000 C to constant weight. The percentage of loss of weight was calculated as 10.35 %.

Determination of ash value:

Weighed accurately 2 grams of Kaandha Chenduram in tarred platinum or silica dish and incinerate at a temperature not exceeding 450^0C until free from carbon, cooled, and weighed. Calculate the percentage of ash as 3.975 with reference to the air dried drug.

Water soluble ash:

To the gooch crucible containing to the total ash, added 25 ml of water and boiled for 5 minutes. Collected the insoluble matter in a sintered glass crucible or on ash less filter paper. Wash with hot water and ignite in a crucible for 15 minutes at a temperature not exceeding 450 ^{0} C substract the weight of the insoluble matter from the weight of the ash the difference of the weight represents the water soluble ash. Calculate the percentage of water soluble ash as 305 with reference to the air dried drug.

Alkalinity as CaCO3 in water soluble ash:

Five grams of Kaandha Chenduram converted to ash, boiled with water filtered. Filtered was tilt rated against 0.1 N of HCl using phenophthalin as an indicator.

Alkalinity of water soluble ash = X x of acid/ 0.1 x W

X –Titre value

W - Weight of material taken

Alkalinity is given as 1.14 % of 0.1 N of HCl equated to 1 gm.

Acid in soluble ash;

Boiled the ash 5 minutes with 25 ml of dilHCl. Collect the insoluble matter in gooch crucible on an ash less filter paper wash with hot water and ignite. Cooled in a dessicator and weighed. Calculated the percentage of acid insoluble ash as 1.96% with reference to the air dried drug.

BIO – CHEMICAL ANALYSIS OF KAANDHA CHENDURAM

PREPARATION OF THE EXTRACT

100 mgs of chenduram is weighed accurately and placed into a clean beaker and added a few drops of conc. Hydrochloric acid and evaporated it well. After evaporation cooled the content and added a few drops of conc. Nitric acid and evaporated it well. After cooling the content add 20 ml of distilled water and dissolved it well. Then it is transferred to 100 ml volumetric flask and made up 100 ml with distilled water. Mix well. Filter it. Then it is taken for analysis.

QUALITATIVE ANALYSIS

S. NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	**TEST FOR CALCIUM** 2ml of the above prepared extract is taken in a clean test tube. To this add 2ml of 4 % ammonium oxalate solution	A white precipitate is formed	Indicates the presence of calcium
2.	**TEST FOR SULPHATE:** 2ml of the extract is added to 5% barium chloride solution.	No white precipitate is formed	Absence of Sulphate
3.	**TEST FOR CHLORIDE** The extract is treated with silver nitrate solution	A white precipitate is formed	Indicates the presence of chloride
4.	**TEST FOR CARBONATE** The substance is treated with concentrated Hcl	No brisk effervescence is formed	Absence of Carbonate

5.	**TEST FOR STARCH** The extract is added with weak iodine solution.	No blue colour is formed	Absence of Starch.
6.	**TEST FOR FERRIC IRON** The extract is acidified with Glacial acetic acid and Potassium ferro cyanide.	No blue colour is formed	Indicates the absence of ferric Iron.
7.	**TEST FOR FERROUS IRON** The extract is treated with concentrated Nitric acid and ammonium thiocyanate solution.	Blood red colour is formed	**Indicates the presence of Ferrous Iron.**
8.	**TEST FOR PHOSPHATE** The extract is treated with ammonium molybdate and concentrated nitric acid.	No yellow precipitate is formed	Absence of Phosphate.
9.	**TEST FOR ALBUMIN** The extract is treated with Esbach's reagent.	No yellow precipitate is formed.	Absence of Albumin
10.	**TEST FOR TANNIC ACID** The extract is treated with ferric chloride.	No blue black precipitate is formed	Absence of Tannic acid.
11.	**TEST FOR UNSATURATION** Potassium permanganate solution is added to the extract	It gets decolourised	**Indicates the presence of Unsaturated compound**.

12.	**TEST FOR THE REDUCING SUGAR** 5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.	No colour change occurs.	Absence of Reducing Sugar.
13.	**TEST FOR AMINO ACID** One or two drops of the extract is placed on a filter paper and dried it well. After drying, 1% Ninhydrin is sprayed over the same and dried it well.	No violet colour is formed	Absence of Amino acid
14.	**TEST FOR ZINC:** The extract is treated with potassium ferro cyanide	A white precipitate is formed	Indicates the presence of Zinc

Inference:

The given sample **"Kaandha Chenduram"** indicates the presence of **calcium, Chloride, Ferrous Iron, Unsaturated compound** and **Zinc.**

PHARMACOLOGICAL ANALYSIS

Pharmacological Analysis of trial medicine:

Study on the **haematinic effect of Kaandha Chenduram** on Albino rats. To prove its haematinic effect of Kaandha Chenduram an attempt was made to study its effect using **"Albino rats".** For this purpose rats are made anemic by the following procedure.

Artificially induced iron deficiency:

The albino rats taken for this experiment were kept in aluminum cages and provided with drinking water and milk, free from iron. The administration of the iron preparation under investigation was started when the hemoglobin level fall to 5.28 gms /100ml at the beginning of the experiments Hb mg% were determined.

Study on rats:

The albino rats were first divided into 2 equal groups with five rats in each group. The first group received Kaandha Chenduram 20mg/100gm body weight with hot water. The second group received normal diet. All the procedures were continued for five weeks in once a day the hemoglobin levels of rats were measured for I, II, III, IV, V weeks. The result is observed are tabulated in the following chart.

STUDY OF HAEMATINIC ACTION

Sl. No.	Drugs	Dose	Before drug Administration				After Drug Administration		Remarks
			Initial Reading	I week	II week	III week	IV week	V week	
1.	**Control (Water)**	20ml	5.8 6.2 6.0 6.4 6.2 6.5	5.8 6.2 6.0 6.4 6.2 6.5	5.6 6.0 5.7 6.1 6.0 6.2	5.5 6.0 5.6 6.0 5.9 6.1	5.3 5.7 5.3 5.7 5.6 5.8	5.2 5.5 5.1 5.5 5.5 5.6	5.8
2.	**Kaandha Chenduram**	20mg	6 6.3 6.7 6.4 6.6 6.9	6.4 6.9 7.0 6.8 6.9 7.1	7.1 7.5 7.9 7.4 7.4 7.9	7.5 7.9 8.1 7.6 7.6 8.2	8.1 8.4 8.6 8.3 8.7 8.9	9.2 9.5 9.7 9.1 9.6 9.8	9.6

Result:

The trail drug **Kaandha Chenduram** has **significant Haematinic action.**

Anti Microbial Activity of Kaandha Chenduram By Kirby Bauer Method

Aim :

To derermine the Antimicrobial activity at Kaandha Chenduram

Components of Medium:

Beef extract	:	300 gms /Lit.
Agar	;	17 gms / Lit.
Starch	:	1.5 gms / Lit.
Caesin Hydroxlate	:	17.5 gms / Lit.
pH	:	7.6

Procedure :

The method of anti microbial activity study is ups diffusion method. The principle of antibiotic sensitivity test is simple. Antibiotic discs are prepared with known concentration of antibiotic and placed on agar plates that has been inoculated with the known micro – organisms. The antibiotic diffuses through the agar producing an antibiotic concentration, gradient antimicrobial of suspectibility is proportional to the diameter of the inhibitory zone around the disc. If the micro – organism which grows up to the edge of the disc are resistant to the antimicrobial agent.

The recommended medium in this method is Muller Hinton Agar. Its pH should be between 7.2 – 7.6 and should be poured to uniform thickness at 4mm in the petri plate (25ml).

Methodology

- Muller Hinton Agar plates are prepared and pseudomonas, vibro cholera, E –coli, Bacillus, Klebsiella, Streptococcus is inoculated separately.

- The prepared discs of antibiotics Kaandha chenduram are placed over the incubated plate using steile forceps and incubated for 24 hours at 37^0 celsius.
- The plates after 24 hours incubation are observed for the zone of inhibition.

Kirby Bauer Antimicrobial Suspectibility Methods

S.No.	Test Drug	Organisms (Cultures)	Susceptibility	Zone size (mm)
1	Kaandha Chenduram	Escherichia coli	Resistant	-
2		Klebsiella	Resistant	-
3		Proteus	Resistant	-
4		Staphylococcus	Sensitive	12mm
5		Streptococcus	Resistant	-
6		Pseudomonas	Resistant	-
7		Candida	Resistant	-

Results :

The drug Kaandha Chenduram is sensitive **against Staphylococcus.**

Scanning Electron Microscopy (SEM)

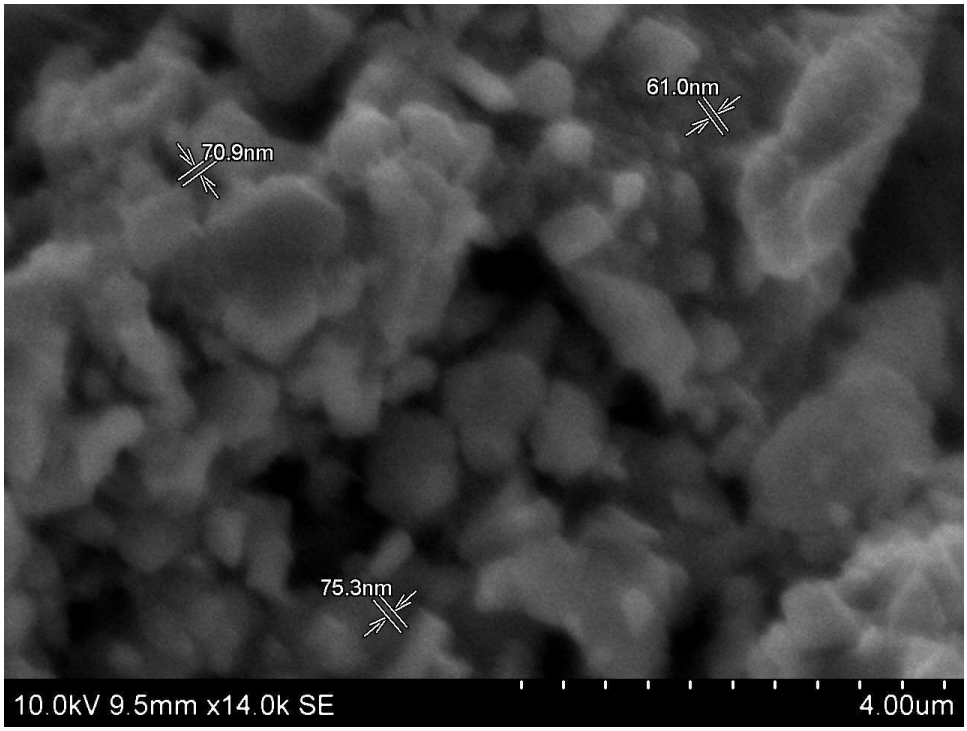
A typical SEM instrument, showing the electron column, sample chamber, EDS detector, electronics console, and visual display monitors.

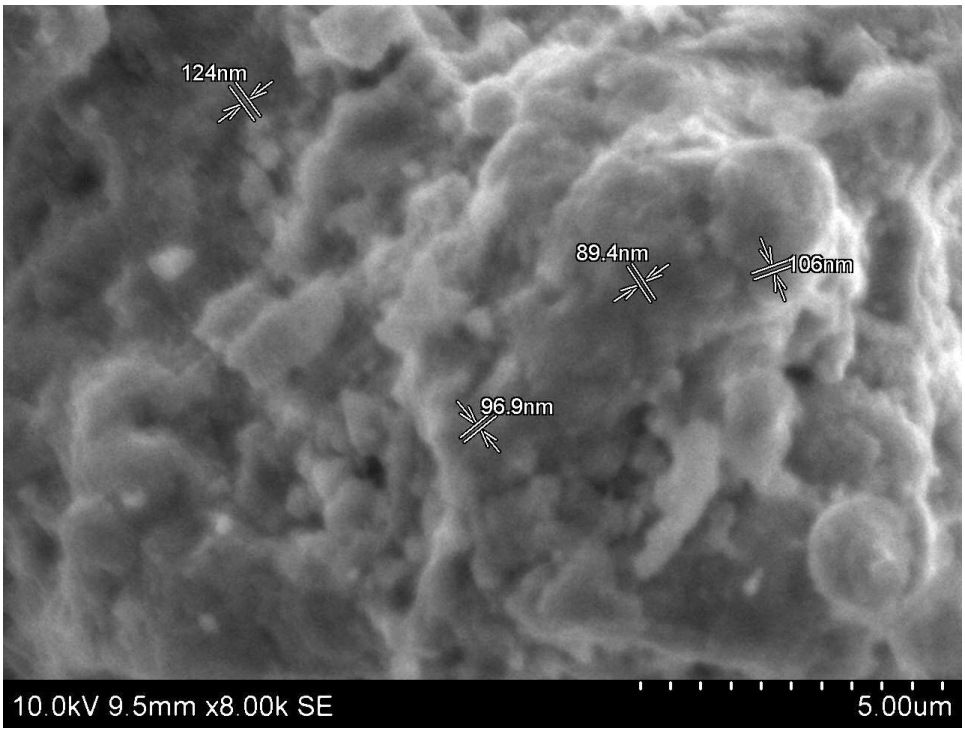
The scanning electron microscope (SEM) uses a focused beam of high-energy electrons to generate a variety of signals at the surface of solid specimens. The signals that derive fromelectron-sample interactions reveal information about the sample including external morphology (texture), chemical composition, and crystalline structure and orientation of materials making up the sample. In most applications, data are collected over a selected area of the surface of the sample, and a 2-dimensional image is generated that displays spatial variations in these properties. Areas ranging from approximately 1 cm to 5 microns in width can be imaged in a scanning mode using conventional SEM techniques (magnification ranging from 20X to approximately 30,000X, spatial resolution of 50 to 100 nm). The SEM is also capable of performing analyses of selected point locations on the sample; this approach is especially useful in qualitatively or semi-quantitatively determining chemical compositions (using EDS), crystalline structure, and crystal orientations (using EBSD). The design and function of the SEM is very similar to the EPMA and considerable overlap in capabilities exists between the two instruments.

Fundamental Principles of Scanning Electron Microscopy (SEM)

Accelerated electrons in an SEM carry significant amounts of kinetic energy, and this energy is dissipated as a variety of signals produced byelectron-sample interactions when the incident electrons are decelerated in the solid sample. These signals include secondary electrons (that produce SEM images), backscattered electrons (BSE), diffracted backscattered electrons (EBSD that are used to determine crystal structures and orientations of minerals), photons (characteristic X-rays that are used for elemental analysis and continuum X-rays), visible light (cathodoluminescence--CL), and heat. Secondary electrons and backscattered electrons are commonly used for imaging samples: secondary electrons are most valuable for showing morphology and topography on samples and backscattered electrons are most valuable for illustrating contrasts in composition in multiphase samples (i.e. for rapid phase discrimination). X-ray generation is produced by inelastic collisions of the incident electrons with electrons in discrete ortitals (shells) of atoms in the sample. As the excited electrons return to lower energy states, they yield X-rays that are of a fixed wavelength (that is related to the difference in energy levels of electrons in different shells for a given element). Thus, characteristic X-rays are produced for each element in a mineral that is "excited" by the electron beam. SEM analysis is considered to be "non-destructive"; that is, x-rays generated by electron interactions do not lead to volume loss of the sample, so it is possible to analyze the same materials repeatedly.

SEM IMAGE OF KAANDHA CHENDURAM IN DIFFERENT MAGNIFICATION





FOURIER TRANSFORM INFRARED SPECTROSCOPY

Fourier transform infrared spectroscopy (**FTIR**)[1] is a technique which is used to obtain an infrared spectrum of absorption, emission, photoconductivity or Raman scattering of a solid, liquid or gas. An FTIR spectrometer simultaneously collects spectral data in a wide spectral range. This confers a significant advantage over a dispersive spectrometer which measures intensity over a narrow range of wavelengths at a time. FTIR has made dispersive infrared spectrometers all but obsolete (except sometimes in the near infrared), opening up new applications of infrared spectroscopy.

The term *Fourier transform infrared spectroscopy* originates from the fact that a Fourier transform (a mathematical process) is required to convert the raw data into the actual spectrum. For other uses of this kind of technique, see Fourier transform spectroscopy.

Conceptual introduction

An FTIR interferogram. The central peak is at the ZPD position ("Zero Path Difference" or zero retardation) where the maximum amount of light passes through the interferometer to the detector.

The goal of any absorption spectroscopy (FTIR, ultraviolet-visible ("UV-Vis") spectroscopy, etc.) is to measure how well a sample absorbs light at each wavelength. The most straightforward way to do this, the "dispersive spectroscopy" technique, is to shine a monochromatic light beam at a sample, measure how much of the light is absorbed, and repeat for each different wavelength. (This is how UV-Vis spectrometers work, for example.)

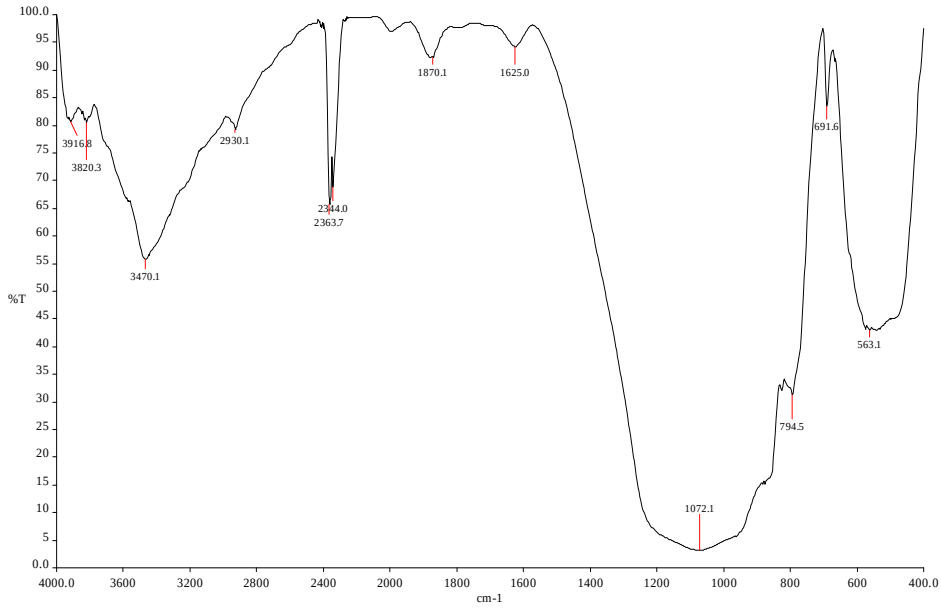
Fourier transform spectroscopy is a less intuitive way to obtain the same information. Rather than shining a monochromatic beam of light at the sample, this technique shines a beam containing many frequencies of light at once, and measures how much of that beam is absorbed by the

sample. Next, the beam is modified to contain a different combination of frequencies, giving a second data point. This process is repeated many times. Afterwards, a computer takes all these data and works backwards to infer what the absorption is at each wavelength.

The beam described above is generated by starting with a broadband light source—one containing the full spectrum of wavelengths to be measured. The light shines into a Michelson interferometer—a certain configuration of mirrors, one of which is moved by a motor. As this mirror moves, each wavelength of light in the beam is periodically blocked, transmitted, blocked, transmitted, by the interferometer, due to wave interference. Different wavelengths are modulated at different rates, so that at each moment, the beam coming out of the interferometer has a different spectrum.

As mentioned, computer processing is required to turn the raw data (light absorption for each mirror position) into the desired result (light absorption for each wavelength). The processing required turns out to be a common algorithm called the Fourier transform (hence the name, "Fourier transform spectroscopy"). The raw data is sometimes called an "interferogram".

FTIR Analysis of Kaandha Chenduram



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PT

REF 4000 100.0 2000 96.9 600

3916.8 80.6 3820.3 80.4 3470.1 55.7 2930.1 79.2 2363.7 65.6

2344.0 68.9 1870.1 92.2 1625.0 94.2 1072.1 3.1 794.5 31.2

691.6 83.4 563.1 42.9

END 12 PEAK(S) FOUND

Infrared Absorption Frequencies	Stretching Vibrations (Functional Class)	Bending Vibrations (Functional Class)
563.1	C–Cl stretch (alkyl halides) Or C-Br stretch (alkyl halides)	
691.6		NH2 & N-H wagging (shifts on H-bonding) (Amines)
794.5	C-Cl stretch (alkyl halides)	(out-of-plane bending) (Alkenes) Or Aromatic C-H Bending
1072.1	C-N (Amines)	
1625		NH2 scissoring (1°-amines) (Amines)
1870.1	3-membered cyclic – 1850 (Ketone)	
2344	2280-2440 cm-1 (med & shp) (Phosphorous Functions)	
2363.7	Si-H silane strong (Silicon Functions)	
2930.1	CH3, CH2 & CH 2 or 3 bands (Alkanes)	
3470.1	O-H (H-bonded), usually broad (Alcohols & Phenols)	
3820.3	Amide N-H Stretch. (As with amines, an amide produces zero to two N-H absorptions depending on its type.)	
3916.8	Amide N-H Stretch	

GEO CHEMICAL ANALYSIS

ICP - OPTICAL EMISSION SPECTROMETRY PRINCIPLE

ICP, abbreviation for Inductively Coupled Plasma, is one method of optical emission spectrometry. When plasma energy is given to an analysis sample from outside, the component elements (atoms) are excited. When the excited atoms return to low energy position, emission rays (spectrum rays) are released and the emission rays that correspond to the photon wavelength are measured. The element type is determined based on the position of the photon rays, and the content of each element is determined based on the rays' intensity

Analytical Chemical Features of ICP-OES

The following features of ICP-OES distinguish it from atomic absorption spectrometer used for similar purposes.

1. Simultaneous, sequential analysis of multiple elements possible
2. Wide linear region of analytical curve
3. Few chemical interference or ionization interference, making analysis of high-matrix samples possible
4. High sensitivity (low limit of detection for majority of elements is 10ppb or lower)
5. High number of measurable elements - elements that are difficult to analyze in atomic absorption spectrometry such as Zr, Ta, rare earth, P and B can be easily analyzed
6. Stable

Equipment

Equipment for ICP optical emission spectrometry consists of a light source unit, a spectrometer, a detector and a data processing unit. There are several types of equipment based on differences in the spectrometer and the detector. The most common type is shown in Figure1.

1) Sequential type

A spectrometer with a Czerny-Turner monochrometor, and a detector with a photomultiplier is most common for this type. With this equipment, programmed wavelength of the spectrometer is consecutively varied to measure multiple elements. This causes rather long measuring time, however, with its high resolution spectrometer, it is favorable for measurement of high-matrix samples.

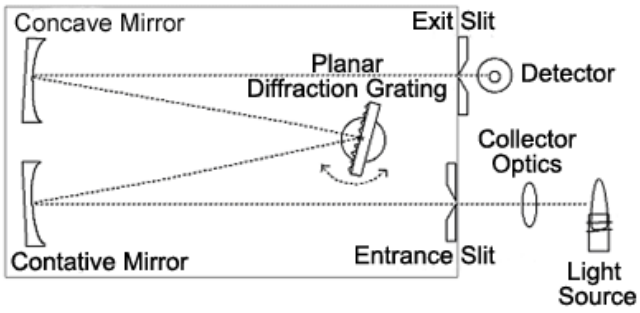


Figure 1: Sequential Type ICP-OES

SOPHISTICATED ANALYTICAL INSTRUMENT FACILITY

IITM,CHENNAI-36

PERKIN ELMER OPTIMA 5300DV ICP-OES

Analyte	**Mean**
As193.696	BDL
Bi 306.772	05.172 mg/L
Cd 226.502	BDL
Cu 324.754	03.415 mg/L
Co 228.616	07.181 mg/L
Fe 238.204	878.125 mg/L
Hg253.652	BDL
Ni 58.693	BDL
Pb 230.204	BDL
Sb 206.833	26.372 mg/L
Zn213.856	32.154 mg/L

BDL=Below detection limit

TOXICOLOGICALANALYSIS

ACUTE TOXICITY STUDY OF KAADHA CHENDURAM

ANIMAL USED FOR THE STUDY:

Wister albino rats breed in the animal house attached to the Post Graduate Pharmacology Department, Govt. Siddha Medical College, Palayamkottai were used.

Sex:

Animals of both sex were used.

Weight:

Animals weighing 100-120gms were selected.

Food and water:

The animals were maintained with standard laboratory pellet food and water ad-Libitum.

Preparation of Animals:

The animals were randomly selected and were marked with picric acid on for and kept in their cages for five days prior to dosing, to allow acclimatization to the laboratory conditions.

Separation of Animals in Groups:

10 rats were divided into 5 groups each consisting of 2 rats, one group is kept as control group by giving water alone.

Dose Levels:

The following dose levels were arbitrarily fixed by persuming range of least toxic to high toxic doses.

I Group	-	40 mg/kg body weight of animal
II Group	-	80 mg/kg body weight of animal
III Group	-	160 mg/kg body weight of animal
IV Group	-	320 mg/kg body weight of animal
V Group	-	640 mg/kg body weight of animal

Route of Administration:

The drug was administered orally.

Test Dose Preparation:

The preparation was done in such a way as 1ml of the suspension contained 40mg of kaandha chenduram and administered as given above in each group. The drug was administered once on the day of the experiment and there after other 24 hour parameters were used.

Experimental set up:

All the five groups were fasted for over night prior to dosing. Following the period of fasting the animals were weighed and test substance was administered through “Rat oral intubation tube”.

After the administration of the test drug, food was withheld for 1 to 2hrs.

OBSERVATION:

The following parameters were noted.

Central effects:

I. Stimulation

- Hyper activity
- Piloerection
- Twitching
- Rigidity
- Irritability
- Jumping
- Colonic convulsion
- Tonic convulsion

II. Depression

- Ptosis
- Sedation
- Sleep

- Loss of traction
- Loss of Pinna reflex
- Ataxia
- Catatonia
- Loss of muscle tone
- Analgesia

Autonomic Effect:

- Straub's tail flicking
- Laboured respiration
- Cyanosis
- Blanching
- Reddening
- Abnormal secretions

At the end of 24 hrs, the number of animals dead in each group was noted and the approximate LD_{50} was determined. The animals were morphologically examined for any toxic symptoms.

Result:

During the acute toxicity study none of the albino rat was found dead. During morphological examination of the rats no toxic symptoms were found. This proves the **safety of the Kaandha Chenduram**.

CLINICAL ASSESMENT

Design of Study :

Open Clinical trial phase II - B

An open clinical trial on Paandu Noi was carried out at the siddha medical college Hospital Palayamkottai in order to assess the efficaccy of kaandha chendhuram.

40 cases with clinical signs and symptoms of Paandu Noi of both sexes with clinical signs sexes with age ranging from 20 to 70 years were selected and treated.

Case Selection :

The patients were selected paandu Noi according to the following criteria.

Including criteria :

- 7 to 10 gms of haemoglobin
- Loss of appetite
- Palpitation
- Dyspnoea on exertion
- Pallor of conjunctiva and nail beds.
- Emasciation
- Fatigue

Excluding criteria :

- Chronic liver disease.
- Chronic renal disease.
- Thalassemia.
- Myxedema.

Clinical pathological Examinations :

Blood Test

- Total count
- Differential count.

  Poymorphs

  Lymphocytes

  Eosinophils
- Haemoglobin
- Erythrocyte sedimentation Rate.
- PCV
- MCV
- Blood sugar
- Blood urea.
- Serum cholesterol.

Urine Examination :

Albumin

Sugar

Deposit

Motion Examinations :

Ova

Cyst

Occult blood.

Line of Treatment :

The trial drug kaandha chenduram was administered orally in a dose of 100 mg two times a day with honey after meals.

Diet and medical advice to consume

- Iron rich diet.
- Green leafy vegetables.
- Meat
- Fruits.
- Egg.
- Cereals.

- Fresh vegetables and fruits.
- Increased dietary fibre
- Food high in vitamin C like fruits like tomatoes helps the body absorbing iron from food.

Observations:

The haematinic action of Kaandha chenduram was observed on the basis of the relief of signs and symptoms which was further confirmed by routine lab investigation.

Among the complaints of Paandu Noi, dyspnoea on exertion were reduced significantly within 15 days and other symptoms gradually subsided during the remaining course of treatment.

The clinical improvements were recorded every seven days in outpatients department and daily in the inpatient department. The opinion and guidance of the gunapadam department. Staff were sought periodically The laboratory investigations were done for the Patients before and after treatment. For all the patient prognosis was noted and recorded.

Result :

Among the 40 cases< 34 cases **(85%)** showed **good** response, 5 cases **(12.5%)** showed **fair** response and 1 case **(2.5%)** showed **poor** response.

Gender wise age distribution of the subjects :

Age group (years)	Males		Females		Total	
	No	%	No	%	No	%
20 – 29	2	28.6	2	6.1	4	10.0
30 – 39	2	28.6	11	33.3	13	32.5
40 – 49	1	14.3	6	18.2	7	17.5
50 – 59	1	14.3	8	24.2	9	22.5
60 – 69	1	14.3	6	18.2	7	17.5
Total	7	100.0	33	100.0	40	100.0

Response of the drug to the Patient

S.No	Response grade	No of persons	percentage
1	Good	34	85.0
2	Fair	5	12.5
3	Poor	1	2.5
	Total	40	100.0

BIO-STATISTICAL ANALYSIS

Description of the study subjects

The clinical trials of the study were described according to their sex and age. The gender of the clinical trials were compared in respect of their age as follows.

Table 1 Gender wise age distribution of the subjects

Age group (years)	Males		Females		Total	
	No	%	No	%	No	%
20-29	**2**	28.6	**2**	**6.1**	**4**	10.0
30-39	**2**	28.6	**11**	33.3	**13**	32.5
40-49	**1**	14.3	**6**	18.2	**7**	17.5
50-59	**1**	14.3	**8**	24.2	**9**	22.5
60-69	**1**	14.3	**6**	18.2	**7**	17.5
Total	**7**	**100.0**	**33**	**100.0**	**40**	**100.0**

The above table 1 states the gender wise age distribution of the clinical trials. The participation of the males was 17.5% and the same of the female was 82.5%.

Table 2: Comparison of age between the gender

Gender	Age (years)		Differences of means	't'	d.f	Significance
	Mean	S.D				
Males	40.0	15.1	5.3 years	1.047	38	P>0.05
Females	45.3	11.6				

The above table 2 compares the ages of males and females. The mean age of male was 40.0 ±15.1 and the female was 45.3 ± 11.6. The difference of age was 5.3 years and the same was not statistically significant (P> 0.05).

Gender wise the ages of the study subjects was not statically significant **(P>0.05).**

Assessment of the Anaemia before and after treatment

The anaemia was assessed on the Heamoglobin level before and after treatment.

Table 3 Heamoglobin level before and after treatment

Level of HB	Before		After	
	No	%	No	%
5,0-7.5	1	2.5	-	-
7.5-10.0	30	75.0	7	17.5
10.0-12.5	9	22.5	32	80.0
12.5-15.0	-	-	1	2.5
Total	40	100.0	40	100.0

The above table 3 states that 75% of the clinical trials of paandu cases haemoglobin level was 7.5 - 10 gms. Among the remaining 22.5% were in between 10 - 22.5 and the 2.5% women had their heamoglobin levels were 10.0 -12.5 and 5 - 7.5 gms respectively. After the treatment 80 % of the patients Hb level was in between 10 - 12.5 gms. The remaining 17.5 % and 2.5% of the patients Hb level were in between 7.5 - 10 gms and 12.5 - 15 gms respectively.

Effectiveness of the drug in the improvement of Hb

The effectiveness of the drug was assessed by calculating the mean Hb level before and after treatment.

Table 4: Hb level before and after treatment

Variable	Before		After		Differences		't'	d.f	Significance
	Mean	S.D	Mean	S.D	Mean	S.D			
Hb	9.13	0.9	10.8	0.9	1.7	0.8	13.740	39	PO.001

The mean Hb level before and after treatment of the paandu patients was given in the above table 4. The mean Hb levels before and after the treatment were 9.13 ± 0.9 and 10.8 ± 0.9 respectively. After treatment the Hb level was improved from before treatment as 1.7 ± 0.8 in an average. The improvement was statistically very highly significant (P<0.001).

Response of the drug

The response of the drugs was assessed by considering other factors related to the improvement of Hb level and graded as good, fair and poor.

Table 5: Response of the drug to the Patient

S.No	Response grade	No. of persons	Percentage
1	Good	34	85.0
2	Fair	5	12.5
3	Poor	1	2.5
	Total	40	100.0

The above table 5 shows the response of the drug. The response of the drug in the improvement of haemoglobin level was outstanding (85%). The fair and poor responses were 12.5% and 2.5% respectively. The drug was significantly improved the level of Hb after the administration of the drug to the paandu patients.

Discussions

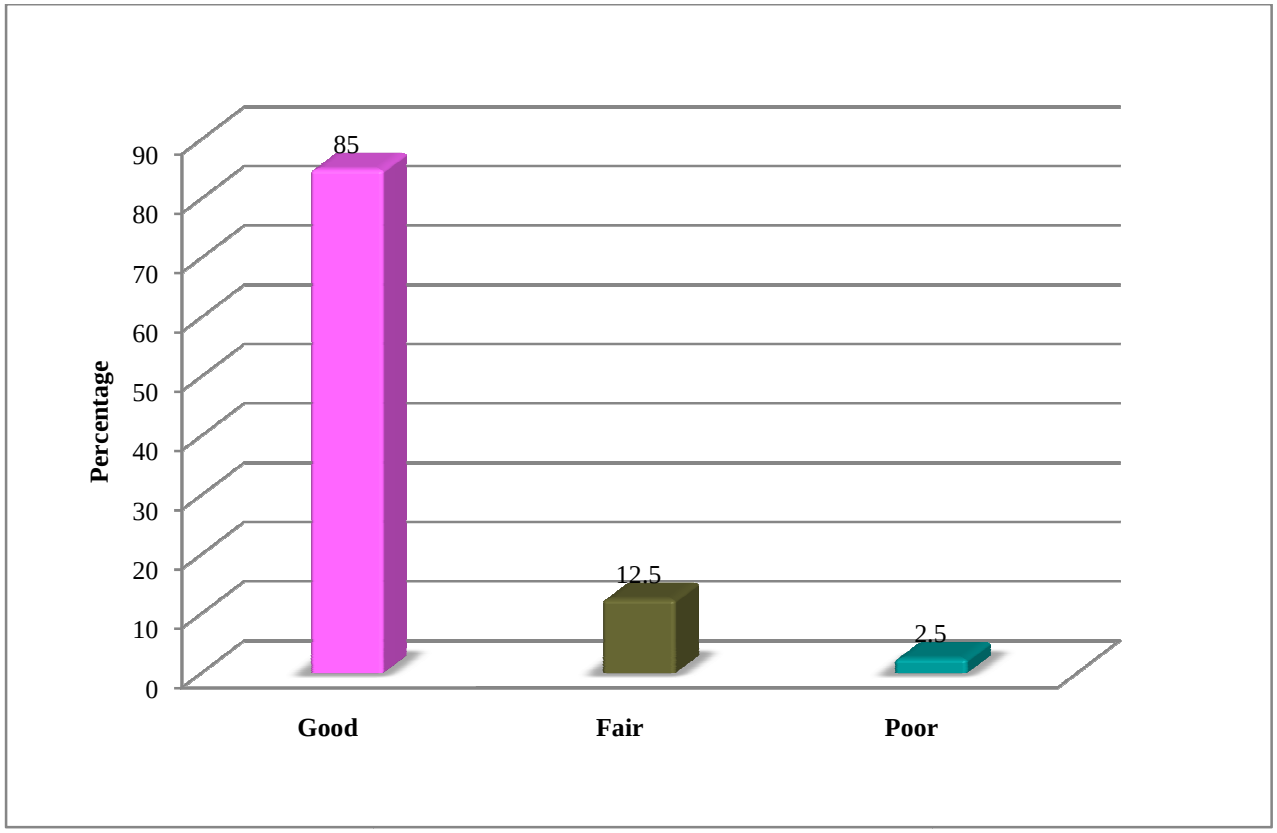
The participants of the clinical study were not significantly differed in respect of their age between the gender (P>0.05).

The drug Kaandha chenduram was very high significantly improved the haemoglobin level of the patients from 9.1 ± 0.9 gms to 10.8 ± 0.9 after treatment. The above improvement was attributed to effectiveness of drug in controlling paandu.

The **outstanding (85%) good response** to the patients was also attributed to the effective of the drugs.

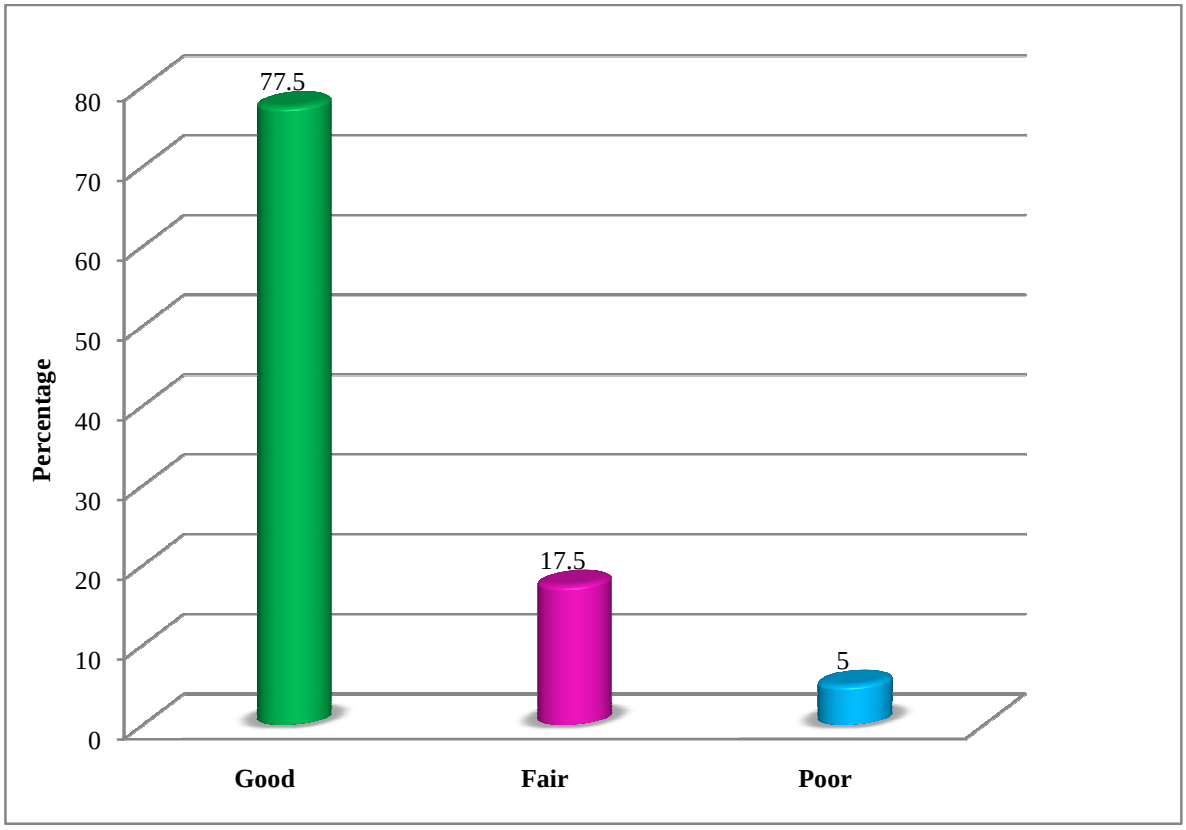
KAANDHA CHENDURAM

Response of The Drug in Percentage



VELLALLIPOO CHOORANAM

Response of The Drug in Percentage



RESULTS AND DISCUSSION

The drug "**Kaandha Chendhuram** was selected in this dissertation to study its therapeutic efficacy in the management of **Paandu Noi**.

According to siddha texts the disease **Paandu Noi** (anaemia) is caused by the increase of azhal kutram. It leads to nutritional deficiency in body, dyspnoea on exertion, anorexia, giddiness, fatigue, palpitation.

"ஆமே தான் அத்திசுரம் பாண்டு சோகை
ஆழமான விடசுரமும் பிரமேகந்தான்
போமேதான் காமாலை
நாமேதான் சொன்னோமே பித்தக்கூறு"

அகத்தியர் பாடல், நோய் நாடல் நோய்
முதல் நாடல் திரட்டு ப.எண் : 177

From the review of literatures it is inferred that the constituents of the drug **"Kaandha Chendhuram"** ie kaandham selected for this study process possess astringent, sour, bitter taste and hot property.

According to **Panchapoodham theory** astringent sour and bitter taste are made up of

Astringent	-	Earth + air
Sour	-	Earth + Fire
Bitter	-	Air + Space

Bitter and astringent tastes neutralize the pitha humour.

"குருதி சுத்தியாக்கும்
கொடிய பித்தம் போக்கும்
.....
குளிர்ந்த துவர்ப்பின் வேலை."

சித்த மருத்துவாங்கச் சுருக்கம் பக்கம் எண் - 40

All these factors seem to neutralize the vitiated pitha humour.

All the patients were given kaandha chendhuram 100mg bd with **honey** as vehicle (Anupanam) This honey acts on pitha humour, thereby

assist in reducing the increased thosam and improving the efficacy of the drug. This has been stated in siddha literature as

"அரசன் முதல்வோ ரையுமாட்டு வித்தாலே
பிரசத் தினாற்போம் பிணி"

- குணபாடம் சீவ வகுப்பு

This explanation is arrived on the basis of the analysis of the gunapadam aspects of the drug which correlates with the pharmacological analysis and clinical assessments.

According to the **physio-chemical analysis** it is indicated that the nature of the drug is amorphous quality due to the **high acid insoluble** ash value and the moisture content is low.

The **Biochemical analysis** shows the presence of **Calcium, Chloride** and **ferrous** iron. The presence of **ferrous** form of iron is essential for synthesis of **Haemoglobin.** Odema will be present in advanced stage of anemia calcium and chloride is necessary for maintenance of acid base balance and water balance

The **Pharmacological** studies show that the drug has got **significant haematinic** activity.

Microbiological analysis of Kaandha chendhuram shows **sensitivity** for **stephylococcus.**

According to scanning **Electron microscopic** result in the picture of Kaandha chendhuram particle size is noted in nanometer. The average value of particle size is 69.6 nm.

It is appeared to contain nano sized particles of Oxidised elements ranging from 124nm to 61.0nm indicating the action of drug at cellular and sub- cellular levels. Our medicine particles are in Oxygen deficient state and clearly identifiable function of particles in nanometer size range. These properties might impact the therapeutic property (Journal of Nano Particle Research Vol – II Pg. No. 655-664).

According to the **Fourier Transform Infra red spectroscopy,** it showed the **functional** groups related to Kaandha chendharam is present.

Geo chemical analysis using Inductively coupled plasma – optical emission spectroscopy shows that **biologically important** transition elements or the elements like **copper, iron, cobalt, zinc** are present in mg/l.

The presence of iron is essential for synthesis of Hb.

Zinc enhances the absorbtion of iron.

Administration of stimulates the production of the hormone. Erythropoietin which promotes erythropoiesis.

Copper is necessary for transportation of iron.

The other toxic metal ions like **Mercury, Cadmium, Lead** and **Arsenic** are absent or not detective inthe drug.

Acute **toxicological study** exhibit the drug upto 640 mg/ kg body weight of albino rats produce **no adverse** or **toxic effects.**

In the clinical assessments, 40 Patients were selected. Out of these **34(85%)** of cases showed **good** response, **4(12.5%)** cases showed **fair** response and **2(2.5%)** of the cases showed **poor** response. The improvement was proved by the alleviation of signs and symptoms present after treatment.

Bio – stastical analysis shows that the drug is **efficient** in controlling Paandu Noi.

During clinical trial the Patients tolerated the drug well and showed **no adverse** reaction.

SUMMARY

The tested drug **"Kaandha Chendhuram"** was selected for this dissertation work from the text **" Kannusamy Parambarai Vaithiyam"** page No. 317.

The drug Kaandha Chendhuram has been selected for the study to establish its efficacy in treating **Paandu Noi.**

Bio chemical analysis revealed the presence of Iron, Calcium and Chloride and their biological significance has been discussed.

In **anti – microbial** studies, the drug was sensitive against **staphylococcus.**

In scanning electron microscopic studies, the drug is appeared to contain **nano sized paricles** of oxidised elements.

In **Fourier Transform Infrared Spectroscopy** study, it is showed that the **functional group related** to Kaandha Chendhuram present.

Geo chemical analysis shows that the presence of biologically important **transition elements** mainly **Iron** necessary for **haematinic action** and other **toxic** elements in **below detection** limit.

Acute Toxicological study shows **no adverse** or toxic effects.

Clinical evaluation was carried out on 40 patients suffering from Paandu Noi in Govt Siddha Medical College, Palayamkottai, revealed that the patient treated with Kaandha Chendhuram had obtained **excellent** improvement.

Bio – stastical analysis also proved that this drug has got **Significant effect** in treating Paandu Noi.

No adverse reaction were noted during the treatment.

CONCLUSION

The above said studies reveal that **“Kaandha Chendhuram”** had showed **Excellent** result in relieving the signs and symptoms of the Patients suffering from Paandu Noi.

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DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 1	**OP.NO: 50790**	**NAME: Faritha**	**AGE/SEX: 45/F**	**OCCUPATION: Coolie**
FROM: 06/07/2012	**TO: 10/08/2012**	**NO. OF DAYS TREATED: 35 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
Dyspnoea with Palpitation loss of appclite and tiredness present since 1 year.	**BLOOD**	**URINE**	**BLOOD**	**URINE**
	TC: 7600 cells/cumm	Albumin: Nil	TC: 8400 cells/cumm	Albumin: Nil
	DC: P-63% L-35% E-2%	Sugar: Nil	DC: P-60% L-37% E-3%	Sugar: Nil
	ESR: ½ hr: 8mm	Deposits: 1-2 epithelial cells	ESR: ½ hr: 5mm	Deposits: NAD
	1 hr: 15mm	**MOTION**	1 hr: 10mm	**MOTION**
	Hb: 60% (9gms%)	Ova: - Nil	Hb: 67% (10gms%)	Ova: - Nil
	MCV: 82cumm	Cyst: - Nil	MCV: - 90cumm	Cyst: - Nil
	PCV: 32%	Occult Blood: -Nil	PCV: - 44%	Occult Blood: Nil
	Sugar(R): 101mgs%		Sugar(R): 96mgs%	
	Urea: - 18 mgs %		Urea: - 22mgs %	
	Cholesterol: 221mgs%		Cholesterol: 210mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 2	**OP.NO: 51702**	**NAME: Selvi**	**AGE/SEX: 38/F**	**OCCUPATION: Coolie**
FROM: 09/07/2012	**TO: 15/08/2012**	**NO. OF DAYS TREATED: 37 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
Dyspnoea with palpitation, tiredness, loss of appetite present since 8 months	**BLOOD**	**URINE**	**BLOOD**	**URINE**
	TC: 9500 cells/cumm	Albumin: Nil	TC: 10200 cells /cumm	Albumin: Nil
	DC: P-60% L-33% E-7%	Sugar: Nil	DC: P-56% L-57% E-7%	Sugar: Nil
	ESR: ½ hr: 5mm	Deposits: NAD	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 10mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 61% (9.7gms%)	Ova: - Nil	Hb: 69% (10.3gms%)	Ova: - Nil
	MCV: - 84 cumm	Cyst: - Nil	MCV: - 88 cumm	Cyst: - Nil
	PCV: - 34%	Occult Blood: -Nil	PCV: - 40%	Occult Blood: Nil
	Sugar(R): 82mgs%		Sugar(R): 94mgs%	
	Urea: 22 mgs%		Urea: 20 mgs%	
	Cholesterol: 168mgs%		Cholesterol: 176mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 3	**OP.NO: 51701**	**NAME: Sugirtha**	**AGE/SEX: 28/F**	**OCCUPATION: Coolie**
FROM: 09/07/2012	**TO: 14/08/2012**	**NO. OF DAYS TREATED: 36 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Dyspnoea with Palpitation loss of appclite and tiredness present since 7 months.	TC: 9800 cells/cumm	Albumin: Nil	TC: 10200 cells/cumm	Albumin: Nil
	DC: P-70% L-28% E-2%	Sugar: Nil	DC: P-71% L-28% E-1%	Sugar: Nil
	ESR: ½ hr: 30mm	Deposits: 2-3 pus cells	ESR: ½ hr: 10mm	Deposits: NAD
	1 hr: 65mm	**MOTION**	1 hr: 20mm	**MOTION**
	Hb: 51% (7.5gms%)	Ova: - Nil	Hb: 72% (10.8gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 75mgs%		Sugar(R): 70mgs%	
	Urea: - 45 mgs %		Urea: - 40mgs %	
	Cholesterol: 169 mgs%		Cholesterol: 160mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 4	**OP.NO: 55788**	**NAME: Gandhimathi**	**AGE/SEX: 41/F**	**OCCUPATION: Coolie**
FROM: 23/07/2012	**TO: 27/08/2012**	**NO. OF DAYS TREATED: 34 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Dyspnoea with palpitation, hair fall and tiredness present since 3 months	TC: 7800 cells/cumm	Albumin: Nil	TC: 7900 cells /cumm	Albumin: Nil
	DC: P-64% L-34% E-2%	Sugar: Nil	DC: P-64% L-35% E-1%	Sugar: Nil
	ESR: ½ hr: 8mm	Deposits: NAD	ESR: ½ hr: 2mm	Deposits: NAD
	1 hr: 16mm	**MOTION**	1 hr: 4mm	**MOTION**
	Hb: 67% (10gms%)	Ova: - Nil	Hb: 72% (10.8gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 68mgs%		Sugar(R): 69mgs%	
	Urea: 26 mgs%		Urea: 20 mgs%	
	Cholesterol: 159mgs%		Cholesterol: 156mgs%	
			Response:	Fair

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 5	**OP.NO: 56458**	**NAME: Subbulakshmi**	**AGE/SEX: 48/F**	**OCCUPATION: Coolie**
FROM: 25/07/2012	**TO: 31/08/2012**	**NO. OF DAYS TREATED: 36 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation and tiredness present since 5 months	TC: 9000 cells/cumm	Albumin: Nil	TC: 9200 cells/cumm	Albumin: Nil
	DC: P-61% L-36% E-3%	Sugar: Nil	DC: P-61% L-36% E-3%	Sugar: Nil
	ESR: ½ hr: 5mm	Deposits: NAD	ESR: ½ hr: 10mm	Deposits: NAD
	1 hr: 10mm	**MOTION**	1 hr: 20mm	**MOTION**
	Hb: 62% (9.3gms%)	Ova: - Nil	Hb: 71% (10.6gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 140mgs%		Sugar(R): 130mgs%	
	Urea: - 24mgs %		Urea: - 22mgs %	
	Cholesterol: 201mgs%		Cholesterol: 200mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 6	**OP.NO: 57684**	**NAME: Selvi**	**AGE/SEX: 25/F**	**OCCUPATION: Coolie**
FROM: 30/07/2012	**TO: 03/09/2012**	**NO. OF DAYS TREATED: 34days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness and hair fall present since 5 months	TC: 10500 cells/cumm	Albumin: Nil	TC: 10200 cells /cumm	Albumin: Nil
	DC: P-57% L-35% E-8%	Sugar: Nil	DC: P-61% L-35% E-4%	Sugar: Nil
	ESR: ½ hr: 10mm	Deposits: NAD	ESR: ½ hr: 8mm	Deposits: NAD
	1 hr: 20mm	**MOTION**	1 hr: 16mm	**MOTION**
	Hb: 61% (9.1gms%)	Ova: - Nil	Hb: 78% (11.7gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 89mgs%		Sugar(R): 102mgs%	
	Urea: 12 mgs%		Urea: 24 mgs%	
	Cholesterol: 163mgs%		Cholesterol: 182mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 7	**OP.NO: 57685**	**NAME: Sundari**	**AGE/SEX: 35/F**	**OCCUPATION: Coolie**
FROM: 30/07/2012	**TO: 04/09/2012**	**NO. OF DAYS TREATED: 35 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation tiredness and hair fall present since 7 months	TC: 9800 cells/cumm	Albumin: Nil	TC: 10100 cells/cumm	Albumin: Nil
	DC: P-68% L-28% E-4%	Sugar: Nil	DC: P-70% L-28% E-2%	Sugar: Nil
	ESR: ½ hr: 25mm	Deposits: NAD	ESR: ½ hr: 10mm	Deposits: NAD
	1 hr: 50mm	**MOTION**	1 hr: 20mm	**MOTION**
	Hb: 58% (8.7gms%)	Ova: - Nil	Hb: 78% (11.5gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 102mgs%		Sugar(R): 100mgs%	
	Urea: - 29mgs %		Urea: - 20mgs %	
	Cholesterol: 209mgs%		Cholesterol: 204mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 8	**OP.NO: 58744**	**NAME: Mrs. Sofia**	**AGE/SEX: 41/F**	**OCCUPATION: Coolie**
FROM: 02/08/2012	**TO: 06/09/2012**	**NO. OF DAYS TREATED: 35 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness and hair fall present since 7 months	TC: 9700 cells/cumm	Albumin: Nil	TC: 10200 cells /cumm	Albumin: Nil
	DC: P-51% L-38% E-5%	Sugar: Nil	DC: P-55% L-40% E-5%	Sugar: Nil
	ESR: ½ hr: 2mm	Deposits: NAD	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 4mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 61% (9.1gms%)	Ova: - Nil	Hb: 80% (12gms%)	Ova: - Nil
	MCV: 90 cumm	Cyst: - Nil	MCV: 98 cumm	Cyst: - Nil
	PCV: 28%	Occult Blood: -Nil	PCV: 42%	Occult Blood: Nil
	Sugar(R): 87mgs%		Sugar(R): 92mgs%	
	Urea: 25 mgs%		Urea: 24 mgs%	
	Cholesterol: 165mgs%		Cholesterol: 182mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 9	**OP.NO: 60801**	**NAME: Kamalam**	**AGE/SEX: 45/F**	**OCCUPATION: Coolie**
FROM: 09/08/2012	**TO: 13/09/2012**	**NO. OF DAYS TREATED: 34 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation tiredness and hair fall present since 1 year	TC: 7600 cells/cumm	Albumin: Nil	TC: 8400 cells/cumm	Albumin: Nil
	DC: P-63% L-35% E-2%	Sugar: Nil	DC: P-60% L-37% E-3%	Sugar: Nil
	ESR: ½ hr: 8mm	Deposits: NAD	ESR: ½ hr: 5mm	Deposits: NAD
	1 hr: 15mm	**MOTION**	1 hr: 10mm	**MOTION**
	Hb: 60% (9gms%)	Ova: - Nil	Hb: 64% (9.5gms%)	Ova: - Nil
	MCV: 83 cumm	Cyst: - Nil	MCV: 90 cumm	Cyst: - Nil
	PCV: 32%	Occult Blood: -Nil	PCV: 38%	Occult Blood: NAD
	Sugar(R): 101mgs%		Sugar(R): 96mgs%	
	Urea: - 24mgs %		Urea: - 21mgs %	
	Cholesterol: 221mgs%		Cholesterol: 210mgs%	
			Response:	Fair

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 10	**OP.NO: 64118**	**NAME: Janani**	**AGE/SEX: 33/F**	**OCCUPATION: Coolie**
FROM: 21/08/2012	**TO: 25/09/2012**	**NO. OF DAYS TREATED: 35 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness and hair fall present since 5 months	TC: 9500 cells/cumm	Albumin: Nil	TC: 10200 cells /cumm	Albumin: Nil
	DC: P-60% L-33% E-7%	Sugar: Nil	DC: P-56% L-37% E-7%	Sugar: Nil
	ESR: ½ hr: 5mm	Deposits: NAD	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 10mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 67% (10gms%)	Ova: - Nil	Hb: 74% (11.1gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 82mgs%		Sugar(R): 94mgs%	
	Urea: 22 mgs%		Urea: 20 mgs%	
	Cholesterol: 168mgs%		Cholesterol: 176mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 11	**OP.NO: 65202**	**NAME: Vasantha**	**AGE/SEX: 42/F**	**OCCUPATION: Coolie**
FROM: 24/08/2012	**TO: 28/09/2012**	**NO. OF DAYS TREATED: 34 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation tiredness and hair fall present since 1 year	TC: 9500 cells/cumm	Albumin: Nil	TC: 10500 cells/cumm	Albumin: Nil
	DC: P-62% L-35% E-3%	Sugar: Nil	DC: P-64% L-34% E-2%	Sugar: Nil
	ESR: ½ hr: 8mm	Deposits: NAD	ESR: ½ hr: 10mm	Deposits: NAD
	1 hr: 16mm	**MOTION**	1 hr: 20mm	**MOTION**
	Hb: 58% (8.7 gms%)	Ova: - Nil	Hb: 70% (10gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 109mgs%		Sugar(R): 110mgs%	
	Urea: - 18mgs %		Urea: - 21mgs %	
	Cholesterol: 171mgs%		Cholesterol: 175mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 12	**OP.NO: 65952**	**NAME: Mrs. Rathna**	**AGE/SEX: 42/F**	**OCCUPATION: Coolie**
FROM: 27/08/2012	**TO: 02/10/2012**	**NO. OF DAYS TREATED: 35 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness and hair fall present since 9 months	TC: 11,400 cells/cumm	Albumin: Nil	TC: 9900 cells /cumm	Albumin: Nil
	DC: P-54% L-44% E-2%	Sugar: Nil	DC: P-50% L-44% E-6%	Sugar: Nil
	ESR: ½ hr: 5mm	Deposits: NAD	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 10mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 64% (9.5gms%)	Ova: - Nil	Hb: 80% (12 gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 160mgs%		Sugar(R): 150mgs%	
	Urea: 45 mgs%		Urea: 40 mgs%	
	Cholesterol: 190 mgs%		Cholesterol: 124mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 13	**OP.NO: 67203**	**NAME: Santhanam**	**AGE/SEX: 44/F**	**OCCUPATION: Coolie**
FROM: 31/08/2012	**TO: 05/10/2012**	**NO. OF DAYS TREATED: 36 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation and tiredness present since 8 months	TC: 8600 cells/cumm	Albumin: Nil	TC: 7600 cells/cumm	Albumin: Nil
	DC: P-50% L-41% E-9%	Sugar: Nil	DC: P-54% L-41% E-5%	Sugar: Nil
	ESR: ½ hr: 9mm	Deposits: NAD	ESR: ½ hr: 7mm	Deposits: NAD
	1 hr: 18mm	**MOTION**	1 hr: 14mm	**MOTION**
	Hb: 64% (10.2gms%)	Ova: - Nil	Hb: 80% (12.8gms%)	Ova: - Nil
	MCV: 82 cumm	Cyst: - Nil	MCV: 94 cumm	Cyst: - Nil
	PCV: 31%	Occult Blood: -Nil	PCV: 40%	Occult Blood: Nil
	Sugar(R): 108mgs%		Sugar(R): 104mgs%	
	Urea: - 28mgs %		Urea: - 26mgs %	
	Cholesterol: 226mgs%		Cholesterol: 212mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 14	**OP.NO: 69610**	**NAME: Mrs. Sumathi**	**AGE/SEX: 35/F**	**OCCUPATION: Coolie**
FROM: 07/09/2012	**TO: 05/10/2012**	**NO. OF DAYS TREATED: 28 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness and hair fall present since 7 months	TC: 10300 cells/cumm	Albumin: Nil	TC: 9800 cells /cumm	Albumin: Nil
	DC: P-57% L-41% E-2%	Sugar: Nil	DC: P-56% L-38% E-6%	Sugar: Nil
	ESR: ½ hr: 8mm	Deposits: NAD	ESR: ½ hr: 7mm	Deposits: NAD
	1 hr: 16mm	**MOTION**	1 hr: 14mm	**MOTION**
	Hb: 68% (10.4gms%)	Ova: - Nil	Hb: 80% (12 gms%)	Ova: - Nil
	MCV:	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV:	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 116mgs%		Sugar(R): 110mgs%	
	Urea: 39 mgs%		Urea: 38 mgs%	
	Cholesterol: 224mgs%		Cholesterol: 220mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 15	**OP.NO: 75079**	**NAME: Selvam**	**AGE/SEX: 45/Male**	**OCCUPATION: Coolie**
FROM: 14/09/2012	**TO: 12/10/2012**	**NO. OF DAYS TREATED: 28 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation and tiredness present since 1 year	TC: 7900 cells/cumm	Albumin: Nil	TC: 8100 cells/cumm	Albumin: Nil
	DC: P-67% L-30% E-3%	Sugar: Nil	DC: P-67% L-30% E-3%	Sugar: Nil
	ESR: ½ hr: 25mm	Deposits: NAD	ESR: ½ hr: 25mm	Deposits: NAD
	1 hr: 50mm	**MOTION**	1 hr: 50mm	**MOTION**
	Hb: 68% (10 gms%)	Ova: - Nil	Hb: 72% (10.8gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 117mgs%		Sugar(R): 110mgs%	
	Urea: - 30 mgs %		Urea: - 20mgs %	
	Cholesterol: 150mgs%		Cholesterol: 140mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 16	**OP.NO: 75567**	**NAME: Ravanan**	**AGE/SEX: 38/Male**	**OCCUPATION: Coolie**
FROM: 25/09/2012	**TO: 24/10/2012**	**NO. OF DAYS TREATED: 29 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation and tiredness present since 7 months	TC: 8000 cells/cumm	Albumin: Nil	TC: 9900 cells /cumm	Albumin: Nil
	DC: P-58% L-38% E-4%	Sugar: Nil	DC: P-61% L-34% E-5%	Sugar: Nil
	ESR: ½ hr: 3mm	Deposits: NAD	ESR: ½ hr: 3mm	Deposits: NAD
	1 hr: 6mm	**MOTION**	1 hr: 6mm	**MOTION**
	Hb: 54% (8.1gms%)	Ova: - Nil	Hb: 64% (9.6 gms%)	Ova: - Nil
	MCV: 82 cumm	Cyst: - Nil	MCV: 96 cumm	Cyst: - Nil
	PCV: 30%	Occult Blood: -Nil	PCV: 40%	Occult Blood: Nil
	Sugar(R): 80mgs%		Sugar(R): 85mgs%	
	Urea: 18 mgs%		Urea: 18 mgs%	
	Cholesterol: 150 mgs%		Cholesterol: 160mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 17	**OP.NO: 1558**	**NAME: Raja**	**AGE/SEX: 35 Male**	**OCCUPATION: Coolie**
FROM: 20/09/2012	**TO: 22/10/2012**	**NO. OF DAYS TREATED: 33 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Dyspnoea present during Exertion, loss of appetite, tiredness, pain in extremities are present since 1 year	TC: 7500 cells/cumm	Albumin: Nil	TC: 10200 cells/cumm	Albumin: Nil
	DC: P-57% L-35% E-8%	Sugar: Nil	DC: P-61% L-35% E-5%	Sugar: Nil
	ESR: ½ hr: 10mm	Deposits: NAD	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 20mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 35% (5.6 gms%)	Ova: - Nil	Hb: 61% (9.1gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 87mgs%		Sugar(R): 80mgs%	
	Urea: - 20mgs %		Urea: - 20mgs %	
	Cholesterol: 160 mgs%		Cholesterol: 158mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 18	**OP.NO: 1562**	**NAME: Madhavan**	**AGE/SEX: 38/F**	**OCCUPATION: Coolie**
FROM: 24/09/2012	**TO: 24/10/2012**	**NO. OF DAYS TREATED: 31 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Dyspnoea present during Exertion, loss of appetite, tiredness, pain in extremities are present since 1 year	TC: 9100 cells/cumm	Albumin: Nil	TC: 9200 cells /cumm	Albumin: Nil
	DC: P-68% L-30% E-2%	Sugar: Nil	DC: P-70% L-28% E-2%	Sugar: Nil
	ESR: ½ hr: 7mm	Deposits: Occ.epi.cells	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 18mm	**MOTION**	1 hr: 10mm	**MOTION**
	Hb: 60% (8.6gms%)	Ova: - Nil	Hb: 73.3% (10.9 gms%)	Ova: - Nil
	MCV: 80 cumm	Cyst: - Nil	MCV: 90 cumm	Cyst: - Nil
	PCV: 32%	Occult Blood: -Nil	PCV: 36%	Occult Blood: Nil
	Sugar(R): 70mgs%		Sugar(R): 72mgs%	
	Urea: 37 mgs%		Urea: 35 mgs%	
	Cholesterol: 158mgs%		Cholesterol: 160mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 19	**OP.NO: 76762**	**NAME: Amaravathi**	**AGE/SEX: 35/F**	**OCCUPATION: Coolie**
FROM: 28/09/2012	**TO: 26/10/2012**	**NO. OF DAYS TREATED: 29 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation and tiredness present since 1 year	TC: 8500 cells/cumm	Albumin: Nil	TC: 8900 cells/cumm	Albumin: Nil
	DC: P-64% L-30% E-6%	Sugar: Nil	DC: P-66% L-33% E-1%	Sugar: Nil
	ESR: ½ hr: 3mm	Deposits: few pus cells	ESR: ½ hr: 2mm	Deposits: NAD
	1 hr: 7mm	**MOTION**	1 hr: 4mm	**MOTION**
	Hb: 61% (9.1 gms%)	Ova: - Nil	Hb: 68% (10.2gms%)	Ova: - Nil
	MCV: 86 cumm	Cyst: - Nil	MCV: 98 cumm	Cyst: - Nil
	PCV: 30%	Occult Blood: -NAD	PCV: 38%	Occult Blood: Nil
	Sugar(R): 78 mgs%		Sugar(R): 77 mgs%	
	Urea: - 22 mgs %		Urea: - 20 mgs %	
	Cholesterol: 171 mgs%		Cholesterol: 170 mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 20	**OP.NO: 77536**	**NAME: Mrs. Megala**	**AGE/SEX: 52/F**	**OCCUPATION: Coolie**
FROM: 02/08/2012	**TO: 06/09/2012**	**NO. OF DAYS TREATED: 31days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation and tiredness present since 1 year	TC: 8500 cells/cumm	Albumin: Nil	TC: 8800 cells /cumm	Albumin: Nil
	DC: P-57% L-38% E-5%	Sugar: Nil	DC: P-60% L-38% E-2%	Sugar: Nil
	ESR: ½ hr: 6mm	Deposits: NAD	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 11mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 60% (9 gms%)	Ova: - Nil	Hb: 74% (11.1 gms%)	Ova: - Nil
	MCV: - 84 cumm	Cyst: - Nil	MCV: - 92 cumm	Cyst: - Nil
	PCV: -30%	Occult Blood: -Nil	PCV: - 40%	Occult Blood: Nil
	Sugar(R): 60mgs%		Sugar(R): 64mgs%	
	Urea: 23 mgs%		Urea: 20 mgs%	
	Cholesterol: 169 mgs%		Cholesterol: 170 mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 21	**OP.NO: 78066**	**NAME: Chandraleka**	**AGE/SEX: 53/F**	**OCCUPATION: Coolie**
FROM: 02/10/2012	**TO: 31/10/2012**	**NO. OF DAYS TREATED: 29 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation tiredness and hair fall present since 8 months	TC: 7200 cells/cumm	Albumin: Nil	TC: 7800 cells/cumm	Albumin: Nil
	DC: P-79% L-18% E-3%	Sugar: Nil	DC: P-80% L-19% E-1%	Sugar: Nil
	ESR: ½ hr: 4mm	Deposits: 1-2 pus cells	ESR: ½ hr: 2mm	Deposits: NAD
	1 hr: 8mm	**MOTION**	1 hr: 4mm	**MOTION**
	Hb: 58% (8.7gms%)	Ova: - Nil	Hb: 61% (9.0gms%)	Ova: - Nil
	MCV: 88 cumm	Cyst: - Nil	MCV: 92 cumm	Cyst: - Nil
	PCV: 31%	Occult Blood: -Nil	PCV: 33%	Occult Blood: Nil
	Sugar(R): 99 mgs%		Sugar(R): 95mgs%	
	Urea: - 19 mgs %		Urea: - 17mgs %	
	Cholesterol: 174 mgs%		Cholesterol: 170 mgs%	
			Response:	Poor

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 22	**OP.NO: 78766**	**NAME: Mrs. Vijaya**	**AGE/SEX: 55/F**	**OCCUPATION: Coolie**
FROM: 04/10/2012	**TO: 02/11/2012**	**NO. OF DAYS TREATED: 28days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness and hair fall present since 9 months	TC: 9200 cells/cumm	Albumin: Nil	TC: 9200 cells /cumm	Albumin: Nil
	DC: P-66% L-30% E-4%	Sugar: Nil	DC: P-60% L-38% E-2%	Sugar: Nil
	ESR: ½ hr: 7mm	Deposits: NAD	ESR: ½ hr: 2mm	Deposits: NAD
	1 hr: 18mm	**MOTION**	1 hr: 4mm	**MOTION**
	Hb: 63.3% (9.4gms%)	Ova: - Nil	Hb: 80% (12 gms%)	Ova: - Nil
	MCV:	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV:	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 87mgs%		Sugar(R): 88mgs%	
	Urea: -		Urea: 24 mgs%	
	Cholesterol: 167 mgs%		Cholesterol: 160mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 23	**OP.NO: 79012**	**NAME: Devarajan**	**AGE/SEX: 50/M**	**OCCUPATION: Coolie**
FROM: 05/10/2012	**TO: 02/11/2012**	**NO. OF DAYS TREATED: days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation and tiredness present since 8 months	TC: 8900 cells/cumm	Albumin: Nil	TC: 9700 cells/cumm	Albumin: Nil
	DC: P-68% L-29% E-3%	Sugar: Nil	DC: P-69% L-30% E-1%	Sugar: Nil
	ESR: ½ hr: 11mm	Deposits: NAD	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 18 mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 60% (9 gms%)	Ova: - Nil	Hb: 71% (10.6gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 102mgs%		Sugar(R): 100mgs%	
	Urea: - 20mgs %		Urea: - 18mgs %	
	Cholesterol: 172 mgs%		Cholesterol: 170 mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 24	**OP.NO: 80912**	**NAME: Mrs. Shanmugathai**	**AGE/SEX: 50/F**	**OCCUPATION: Coolie**
FROM: 11/10/2012	**TO: 09/11/2012**	**NO. OF DAYS TREATED: 28days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness and hair fall present since 7 months	TC: 9900 cells/cumm	Albumin: Nil	TC: 11200 cells /cumm	Albumin: Nil
	DC: P-67% L-30% E-3%	Sugar: Nil	DC: P-58% L-30% E-2%	Sugar: Nil
	ESR: ½ hr: 6mm	Deposits: NAD	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 12mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 54% (8.1gms)	Ova: - Nil	Hb: 64% (9.6 gms%)	Ova: - Nil
	MCV: 88 cumm	Cyst: - Nil	MCV: 98 cumm	Cyst: - Nil
	PCV: 31%	Occult Blood: -Nil	PCV: 42%	Occult Blood: Nil
	Sugar(R): 76mgs%		Sugar(R): 95mgs%	
	Urea: 25 mgs%		Urea: 20 mgs%	
	Cholesterol: 219mgs%		Cholesterol: 201mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 25	**OP.NO:**	**NAME: Mrs. Devaki**	**AGE/SEX: 41/F**	**OCCUPATION: Coolie**
FROM: 12/10/2012	**TO: 09/11/2012**	**NO. OF DAYS TREATED: 27 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation tiredness and hair fall present since 5 months	TC: 7100 cells/cumm	Albumin: Nil	TC: 7100 cells/cumm	Albumin: Nil
	DC: P-48% L-49% E-3%	Sugar: Nil	DC: P-49% L-50% E-1%	Sugar: Nil
	ESR: ½ hr: 7mm	Deposits: NAD	ESR: ½ hr: 2mm	Deposits: NAD
	1 hr: 16mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 51% (7.5 gms%)	Ova: - Nil	Hb: 54% (8gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 81 mgs%		Sugar(R): 80mgs%	
	Urea: -		Urea: - 19mgs %	
	Cholesterol: 100 mgs%		Cholesterol: 99mgs%	
			Response:	Fair

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 26	**OP.NO:**	**NAME: Mrs. Rani**	**AGE/SEX: 54/F**	**OCCUPATION: Coolie**
FROM: 16/10/2012	**TO: 14/11/2012**	**NO. OF DAYS TREATED: 28days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation during walking and tiredness present since 7 months	TC: 7900 cells/cumm	Albumin: Nil	TC: 8000 cells /cumm	Albumin: Nil
	DC: P-67% L-30% E-3%	Sugar: Nil	DC: P-69% L-30% E-1%	Sugar: Nil
	ESR: ½ hr: 8mm	Deposits: 1-2 pus cells	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 17mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 65% (9.7gms%)	Ova: - Nil	Hb: 80% (12 gms%)	Ova: - Nil
	MCV: 89 cumm	Cyst: - Nil	MCV: 96 cumm	Cyst: - Nil
	PCV: 34%	Occult Blood: -Nil	PCV: 42%	Occult Blood: Nil
	Sugar(R): 105mgs%		Sugar(R): 100mgs%	
	Urea: 45 mgs%		Urea: 25 mgs%	
	Cholesterol: 225mgs%		Cholesterol: 210 mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 27	**OP.NO: 82385**	**NAME: Mrs. Shyamala**	**AGE/SEX: 50/F**	**OCCUPATION: Coolie**
FROM: 16/10/2012	**TO: 14/11/2012**	**NO. OF DAYS TREATED: 28 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation during walking tiredness and hair fall present since 5 months	TC: 6400 cells/cumm	Albumin: Nil	TC: 7100 cells/cumm	Albumin: Nil
	DC: P-58% L-40% E-2%	Sugar: Nil	DC: P-60% L-38% E-2%	Sugar: Nil
	ESR: ½ hr: 8mm	Deposits: NAD	ESR: ½ hr: 2mm	Deposits: NAD
	1 hr: 20mm	**MOTION**	1 hr: 4mm	**MOTION**
	Hb: 51% (7.5gms%)	Ova: - Nil	Hb: 72% (10.8gms%)	Ova: - Nil
	MCV: -	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV: -	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 89mgs%		Sugar(R): 85 mgs%	
	Urea: - 17mgs %		Urea: - 16 mgs %	
	Cholesterol: 127mgs%		Cholesterol: 126 mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 28	**OP.NO: 84554**	**NAME: Poongothai**	**AGE/SEX: 62/F**	**OCCUPATION: Coolie**
FROM: 23/10/2012	**TO: 23/11/2012**	**NO. OF DAYS TREATED: 30 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness and hair fall present since 8 months	TC: 8500 cells/cumm	Albumin: Nil	TC: 8300 cells /cumm	Albumin: Nil
	DC: P-68% L-28% E-4%	Sugar: Nil	DC: P-70% L-29% E-1%	Sugar: Nil
	ESR: ½ hr: 2mm	Deposits: 1-2 pus cells	ESR: ½ hr: 7mm	Deposits: NAD
	1 hr: 5mm	**MOTION**	1 hr: 15mm	**MOTION**
	Hb: 61% (9.1gms%)	Ova: - Nil	Hb: 80% (12 gms%)	Ova: - Nil
	MCV: 80 cumm	Cyst: - Nil	MCV: 90 cumm	Cyst: - Nil
	PCV: 30%	Occult Blood: -Nil	PCV: 38%	Occult Blood: Nil
	Sugar(R): 103 mgs%		Sugar(R): 99mgs%	
	Urea: 22 mgs%		Urea: 20 mgs%	
	Cholesterol: 120 mgs%		Cholesterol: 115 mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 29	**OP.NO: 85205**	**NAME: Mrs. Rekha**	**AGE/SEX: 35/F**	**OCCUPATION: Coolie**
FROM: 26/10/2012	**TO: 23/11/2012**	**NO. OF DAYS TREATED: 27 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation and tiredness present since 7 months	TC: 6500 cells/cumm	Albumin: Nil	TC: 7000 cells/cumm	Albumin: Nil
	DC: P-63% L-30% E-7%	Sugar: Nil	DC: P-65% L-33% E-2%	Sugar: Nil
	ESR: ½ hr: 2mm	Deposits:1-2 pus cells	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 5mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 56% (8.4gms%)	Ova: - Nil	Hb: 66% (9.9 gms%)	Ova: - Nil
	MCV:	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV:	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 79mgs%		Sugar(R): 70mgs%	
	Urea: - 20mgs %		Urea: - 20mgs %	
	Cholesterol: 89mgs%		Cholesterol: 80mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 30	**OP.NO: 85204**	**NAME: Mahalakshmi**	**AGE/SEX: 38/F**	**OCCUPATION: Coolie**
FROM: 26/10/2012	**TO: 23/11/2012**	**NO. OF DAYS TREATED: 27days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness and hair fall present since 9 months	TC: 7300 cells/cumm	Albumin: Nil	TC: 7500 cells /cumm	Albumin: Nil
	DC: P-65% L-31% E-4%	Sugar: Nil	DC: P-67% L-31% E-2%	Sugar: Nil
	ESR: ½ hr: 7mm	Deposits: 2-3 pus cells	ESR: ½ hr: 7mm	Deposits: NAD
	1 hr: 10mm	**MOTION**	1 hr: 10mm	**MOTION**
	Hb: 54% (8.1gms%)	Ova: - Nil	Hb: 60% (9 gms%)	Ova: - Nil
	MCV: 86 cumm	Cyst: - Nil	MCV: 96 cumm	Cyst: - Nil
	PCV: 30%	Occult Blood: -Nil	PCV: 40%	Occult Blood: Nil
	Sugar(R): 71mgs%		Sugar(R): 75mgs%	
	Urea: 41mgs%		Urea: 40 mgs%	
	Cholesterol: 199 mgs%		Cholesterol: 180 mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 31	**OP.NO: 1794**	**NAME: Mrs.Mari**	**AGE/SEX: 38/F**	**OCCUPATION: Coolie**
FROM: 20/06/2012	**TO: 26/07/2012**	**NO. OF DAYS TREATED: 36 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Dyspnoea during walking pallor, Palpitation, loss of appetite present since 1 year.	TC: 8900 cells/cumm	Albumin: Nil	TC: 9100 cells/cumm	Albumin: Nil
	DC: P-58% L-40% E-2%	Sugar: Nil	DC: P-60% L-39% E-1%	Sugar: Nil
	ESR: ½ hr: 20mm	Deposits: few epi cells	ESR: ½ hr: 5mm	Deposits: NAD
	1 hr: 35mm	**MOTION**	1 hr: 10mm	**MOTION**
	Hb: 64.7% (10 gms%)	Ova: - Nil	Hb: 80% (12 gms%)	Ova: - Nil
	MCV: 90 cumm	Cyst: - Nil	MCV: 95 cumm	Cyst: - Nil
	PCV: 36%	Occult Blood: -Nil	PCV: 42%	Occult Blood: Nil
	Sugar(R): 138 mgs%		Sugar(R): 128 mgs%	
	Urea: - 26 mgs %		Urea: - 25 mgs %	
	Cholesterol: 122 mgs%		Cholesterol: 120 mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 32	**OP.NO: 1996**	**NAME: Nachiyar**	**AGE/SEX: 63/F**	**OCCUPATION: Coolie**
FROM: 20/06/2012	**TO: 26/07/2012**	**NO. OF DAYS TREATED: 35days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation loss of appetite and tiredness present since 9 months	TC: 7800 cells/cumm	Albumin: Nil	TC: 8000 cells /cumm	Albumin: Nil
	DC: P-48% L-40% E-12%	Sugar: Nil	DC: P-60% L-38% E-2%	Sugar: Nil
	ESR: ½ hr: 3mm	Deposits: 2-3 pus cells	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 5mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 60% (9 gms%)	Ova: - Nil	Hb: 75% (11.2 gms%)	Ova: - Nil
	MCV: 89 cumm	Cyst: - Nil	MCV: 102 cumm	Cyst: - Nil
	PCV: 29%	Occult Blood: -Nil	PCV: 38%	Occult Blood: Nil
	Sugar(R): 106mgs%		Sugar(R): 102mgs%	
	Urea: 38 mgs%		Urea: 25 mgs%	
	Cholesterol: 140 mgs%		Cholesterol: 142mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 33	**IP.NO: 210**	**NAME: Chellammal**	**AGE/SEX: 61/F**	**OCCUPATION: Coolie**
FROM: 21/06/2012	**TO: 25/07/2012**	**NO. OF DAYS TREATED: days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation loss of appetite and tiredness present since 8 months	TC: 8000 cells/cumm	Albumin: Nil	TC: 8100 cells/cumm	Albumin: Nil
	DC: P-68% L-29% E-3%	Sugar: Nil	DC: P-68% L-30% E-2%	Sugar: Nil
	ESR: ½ hr: 9mm	Deposits: 1-2 pus cells	ESR: ½ hr: 2mm	Deposits: NAD
	1 hr: 18mm	**MOTION**	1 hr: 4mm	**MOTION**
	Hb: 64% (9.5gms%)	Ova: - Nil	Hb: 76% (12.1gms%)	Ova: - Nil
	MCV: 86 cumm	Cyst: - Nil	MCV: - 96 cumm	Cyst: - Nil
	PCV: 30%	Occult Blood: -Nil	PCV: - 40%	Occult Blood: Nil
	Sugar(R): 133 mgs%		Sugar(R): 130mgs%	
	Urea: - 20 mgs %		Urea: - 20mgs %	
	Cholesterol: 143 mgs%		Cholesterol: 140mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 34	**IP.NO: 2068**	**NAME: Bakiam**	**AGE/SEX: 60/F**	**OCCUPATION: Coolie**
FROM: 26/06/2012	**TO: 30/07/2012**	**NO. OF DAYS TREATED: 34 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness loss of appetite present since 1 year	TC: 11200 cells/cumm	Albumin: Nil	TC: 11300 cells /cumm	Albumin: Nil
	DC: P-70% L-25% E-5%	Sugar: Nil	DC: P-73% L-27% E-5%	Sugar: Nil
	ESR: ½ hr: 22mm	Deposits: NAD	ESR: ½ hr: 20mm	Deposits: NAD
	1 hr: 50mm	**MOTION**	1 hr: 48mm	**MOTION**
	Hb: 58% (8.7gms%)	Ova: - Nil	Hb: 70% (10.5 gms%)	Ova: - Nil
	MCV:	Cyst: - Nil	MCV:	Cyst: - Nil
	PCV:	Occult Blood: -Nil	PCV:	Occult Blood: Nil
	Sugar(R): 78mgs%		Sugar(R): 76mgs%	
	Urea: 23 mgs%		Urea: 20 mgs%	
	Cholesterol: 210 mgs%		Cholesterol: 200mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 35	**IP.NO: 3546**	**NAME: Anandham**	**AGE/SEX: 61/F**	**OCCUPATION: Coolie**
FROM: 28/07/2012	**TO: 23/08/2012**	**NO. OF DAYS TREATED: 26 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation tiredness and loss of appetite hair fall present since 7 months	TC: 8600 cells/cumm	Albumin: Nil	TC: 8800 cells/cumm	Albumin: Nil
	DC: P-55% L-40% E-5%	Sugar: Nil	DC: P-54% L-41% E-5%	Sugar: Nil
	ESR: ½ hr: 4mm	Deposits: 1-2 pus cells	ESR: ½ hr: 2mm	Deposits: NAD
	1 hr: 8mm	**MOTION**	1 hr: 4mm	**MOTION**
	Hb: 64% (9.1gms%)	Ova: - Nil	Hb: 68% (10gms%)	Ova: - Nil
	MCV: 89 cumm	Cyst: - Nil	MCV: 96 cumm	Cyst: - Nil
	PCV: 29%	Occult Blood: -Nil	PCV: 40%	Occult Blood: Nil
	Sugar(R): 91mgs%		Sugar(R): 90mgs%	
	Urea: - 23mgs %		Urea: - 20mgs %	
	Cholesterol: 259mgs%		Cholesterol: 220mgs%	
			Response:	Fair

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 36	**IP.NO: 2554**	**NAME: Lakshmi**	**AGE/SEX: 54/F**	**OCCUPATION: Coolie**
FROM: 04/08/2012	**TO: 01/09/2012**	**NO. OF DAYS TREATED: 27days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation, tiredness and hair fall present since 9 months	TC: 8800 cells/cumm	Albumin: Nil	TC: 8800 cells /cumm	Albumin: Nil
	DC: P-55% L-40% E-5%	Sugar: Nil	DC: P-54% L-41% E-5%	Sugar: Nil
	ESR: ½ hr: 2mm	Deposits: 1-2 pus cells	ESR: ½ hr: 2mm	Deposits: NAD
	1 hr: 4mm	**MOTION**	1 hr: 4mm	**MOTION**
	Hb: 64% (9.1gms%)	Ova: - Nil	Hb: 75% (10.7 gms%)	Ova: - Nil
	MCV: 89 cumm	Cyst: - Nil	MCV: 96 cumm	Cyst: - Nil
	PCV: 29%	Occult Blood: -Nil	PCV: 40%	Occult Blood: Nil
	Sugar(R): 91 mgs%		Sugar(R): 90mgs%	
	Urea: 23 mgs%		Urea: 20 mgs%	
	Cholesterol: 259 mgs%		Cholesterol: 220mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 37	**IP.NO: 2879**	**NAME: Arunachala Vadivu**	**AGE/SEX: 60/F**	**OCCUPATION: Coolie**
FROM: 31/08/2012	**TO: 27/09/2012**	**NO. OF DAYS TREATED: 27days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea, with Palpitation tiredness and hair fall present since 1year	TC: 9100 cells/cumm	Albumin: Nil	TC: 9900 cells/cumm	Albumin: Nil
	DC: P-56% L-36% E-8%	Sugar: Nil	DC: P-58% L-39% E-3%	Sugar: Nil
	ESR: ½ hr: 18mm	Deposits: NAD	ESR: ½ hr: 10mm	Deposits: NAD
	1 hr: 30mm	**MOTION**	1 hr: 20mm	**MOTION**
	Hb: 63.3% (9.4 gms%)	Ova: - Nil	Hb: 68% (10gms%)	Ova: - Nil
	MCV:	Cyst: - Nil	MCV:	Cyst: - Nil
	PCV:	Occult Blood: -Nil	PCV:	Occult Blood: Nil
	Sugar(R): 92mgs%		Sugar(R): 90mgs%	
	Urea: - 23 mgs %		Urea: - 21mgs %	
	Cholesterol: 170 mgs%		Cholesterol: 174mgs%	
			Response:	Fair

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 38	**IP.NO: 3522**	**NAME: Kaniyan**	**AGE/SEX: 62/M**	**OCCUPATION: Coolie**
FROM: 11/10/2012	**TO: 07/11/2012**	**NO. OF DAYS TREATED: 26 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
	BLOOD	**URINE**	**BLOOD**	**URINE**
Pt. complaints dyspnoea with palpitation during walking and tiredness present since 1 year	TC: 9500 cells/cumm	Albumin: Nil	TC: 9200 cells /cumm	Albumin: Nil
	DC: P-54% L-34% E-2%	Sugar: Nil	DC: P-62% L-36% E-2%	Sugar: Nil
	ESR: ½ hr: 6mm	Deposits: NAD	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 12mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 63.3% (9.4gms%)	Ova: - Nil	Hb: 76.7% (11.5 gms%)	Ova: - Nil
	MCV: 76 cumm	Cyst: - Nil	MCV: 86 cumm	Cyst: - Nil
	PCV: 40%	Occult Blood: -Nil	PCV: 46%	Occult Blood: Nil
	Sugar(R): 90mgs%		Sugar(R): 88mgs%	
	Urea: 24 mgs%		Urea: 24 mgs%	
	Cholesterol: 180 mgs%		Cholesterol: 180mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 39	**IP.NO: 3557**	**NAME: Mrs. Backiyathai**	**AGE/SEX: 38/F**	**OCCUPATION: Coolie**
FROM: 19/10/2012	**TO: 16/11/2012**	**NO. OF DAYS TREATED: 27 days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
Pt. complaints dyspnoea, with Palpitation tiredness and hair fall present since 8 months	**BLOOD**	**URINE**	**BLOOD**	**URINE**
	TC: 8100 cells/cumm	Albumin: Nil	TC: 9200 cells/cumm	Albumin: Nil
	DC: P-60% L-36% E-4%	Sugar: Nil	DC: P-61% L-36% E-3%	Sugar: Nil
	ESR: ½ hr: 2mm	Deposits: NAD	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 4mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 68% (10.2gms%)	Ova: - Nil	Hb: 78% (11.7gms%)	Ova: - Nil
	MCV:	Cyst: - Nil	MCV: -	Cyst: - Nil
	PCV:	Occult Blood: -Nil	PCV: -	Occult Blood: Nil
	Sugar(R): 115mgs%		Sugar(R): 122mgs%	
	Urea: - 23mgs %		Urea: - 22mgs %	
	Cholesterol: 193mgs%		Cholesterol: 192mgs%	
			Response:	Good

DRUG: Kaandha chenduram 100mg bd with honey			**DIAGONOSIS**: PAANDU	
S.NO: 40	**IP.NO: 3803**	**NAME: Kannammal**	**AGE/SEX: 37/F**	**OCCUPATION: Coolie**
FROM: 08/11/2012	**TO: 05/12/2012**	**NO. OF DAYS TREATED: days**		

COMPLAINTS AND DURATION	**INVESTIGATION**			
	BEFORE TREATMENT		**AFTER TREATMENT**	
Pt. complaints dyspnoea with palpitation during walking and tiredness present since 1 year	**BLOOD**	**URINE**	**BLOOD**	**URINE**
	TC: 7800 cells/cumm	Albumin: Nil	TC: 7900 cells /cumm	Albumin: Nil
	DC: P-64% L-34% E-2%	Sugar: Nil	DC: P-65% L-34% E-2%	Sugar: Nil
	ESR: ½ hr: 8mm	Deposits: few pus cells	ESR: ½ hr: 4mm	Deposits: NAD
	1 hr: 16mm	**MOTION**	1 hr: 8mm	**MOTION**
	Hb: 61%(9.7grms)	Ova: - Nil	Hb: 78% (11.7 gms%)	Ova: - Nil
	MCV:	Cyst: - Nil	MCV:	Cyst: - Nil
	PCV:	Occult Blood: -Nil	PCV:	Occult Blood: Nil
	Sugar(R): 68 mgs%		Sugar(R): 69mgs%	
	Urea: 26 mgs%		Urea: 25 mgs%	
	Cholesterol: 159 mgs%		Cholesterol: 150mgs%	
			Response:	Good

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor response – Insignificant relief of symptoms

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

69, Anna Salai, Guindy, Chennai - 32.

DEPARTMENT OF SIDDHA

CERTIFICATE OF PARTICIPATION

This is to certify that Dr. .....S.JAMUNA RANI.....

has participated as ~~Resource Person~~ / Delegate in the Workshop on

"Research Methodology & Biostatistics" for AYUSH Post Graduates &

Researchers organized by the Dept. of Siddha from 04.07.2011 to 08.07.2011

Dr. N. Kabilan	Dr. Sudha Seshayyan	Dr. Mayil Vahanan Natarajan
Prof. & Head	Registrar i/c	Vice-Chancellor

GOVT. SIDDHA MEDICAL COLLEGE,

PALAYAMKOTTAI,

TIRUNELVELI – 627002.

SCREENING COMMITTEE

Candidate Reg No:32101510

This is to certify that the dissertation topics ***Hypoglycemic Activity*** of the single drug **VELLALLI POO CHOORANAM**, and ***Haematinic Activity*** of compound drug **KAANDHA CHENDURAM** have been approved by the screening committee.

S.No	Name	Signature
1.	Pro. Dr. N. CHANDRAMOHAN DOSS, MD (S) Principal & Chairman	
2.	Pro. Dr. R. THANGAMONEY, MD (S)	
3.	Dr. A. SUBRAMANIAN, MD (S)	

(Kindly make sure that the minutes of the meeting duly signed by all the participation are maintained by the college office)

SHANMUGHA ARTS, SCIENCE, TECHNOLOGY & RESEARCH ACADEMY (SASTRA)

(A University established under Section 3 of the UGC Act, 1956)

SASTRA University Tirumalaisamudram, Thanjavur-613401.

Centre for Advanced Research in Indian System of Medicine (CARISM)

GOVT. APPROVED DRUG TESTING LABORATORY APPROVAL No. R.DIS.NO.:282/2010

CERTIFICATE OF ANALYSIS

Name of the Product: 082 -Vellallipoo Chooranam — Report No : CAR/DTL/CUR053

Date of Sampling : 09.10.12 — Report Date: 18.12.12

PHYSICO-CHEMICAL STANDARDISATION

S.No	TESTS	AS PER ANALYSIS
1.	Description	Brown coloured Powder
2.	pH(1% w/v solution)	5.61
3.	Bulk density	0.24gm/ml
4.	Tap density	0.37gm/ml
5.	Loss on Drying at 105°C	5.07%
6.	Total Ash	57.36%
7.	Acid Insoluble Ash	1.12%
8.	Water Soluble Extractive	32.35%
9.	Alcohol Soluble Extractive	18.69%

SIEVE ANALYSIS

S.No	Sieve No (µ)	% of particles retained
1.	600	-
2.	300	-
3.	150	20
4.	75	35.1
5.	Final Product	44.1

ANALYST

LAB IN-CHARGE

ASSOCIATE DEAN & CO-ORDINATOR

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SASTRA University Tirumalaisamudram, Thanjavur-613401.

Centre for Advanced Research in Indian System of Medicine (CARISM)

GOVT. APPROVED DRUG TESTING LABORATORY APPROVAL No. R.DIS.NO.:282/2010

CERTIFICATE OF ANALYSIS

Name of the Product: 081-Kaandhachenduram
Date of Sampling :09.10.12

Report No : CAR/DTL/CHE069
Report Date: 18.12.12

PHYSICO-CHEMICAL STANDARDISATION

S.No	TESTS	AS PER ANALYSIS
1.	Description	Dark brown coloured powder
2.	Loss on Drying at 105°C	0.19%
3.	Total Ash	99.31%
4.	Acid Insoluble Ash	98.53%

ANALYST

LAB IN-CHARGE

ASSOCIATE DEAN & CO-ORDINATOR

CONTINUOUS MEDICAL EDUCATION PROGRAMME

Conducted by

POST GRADUATE DEPARTMENT OF GUNAPADAM
GOVT. SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI

Certificate

This is to certify that Dr.S.JAMUNA RANI.
PG Gunapadam Department, Government Siddha Medical College, Palayamkottai has actively participated in the CME Programme held on 09.01.2013 at conference hall Govt. Siddha Medical College, Palayamkottai, Tirunelveli District.

This programme focussed on **"INTERLINK BETWEEN THE PLANTS AND THE PLANETS, HERBAL REMEDY FOR TUBERCULOSIS & GENERAL GUIDELINES FOR RESEARCH AND EVALUATION OF TRADITIONAL MEDICINE".**

Dr.G.ESSAKKY PANDIAN
Asst. Lecturer, Co-ordinator

Dr.A. KINGSLY
Lecturer, HOD i/c

Dr. N. CHANDRA MOHAN DOSS
Principal

காந்தம்

சுத்தித்த காந்தத் தூள்

Sarvangasana

Halasana

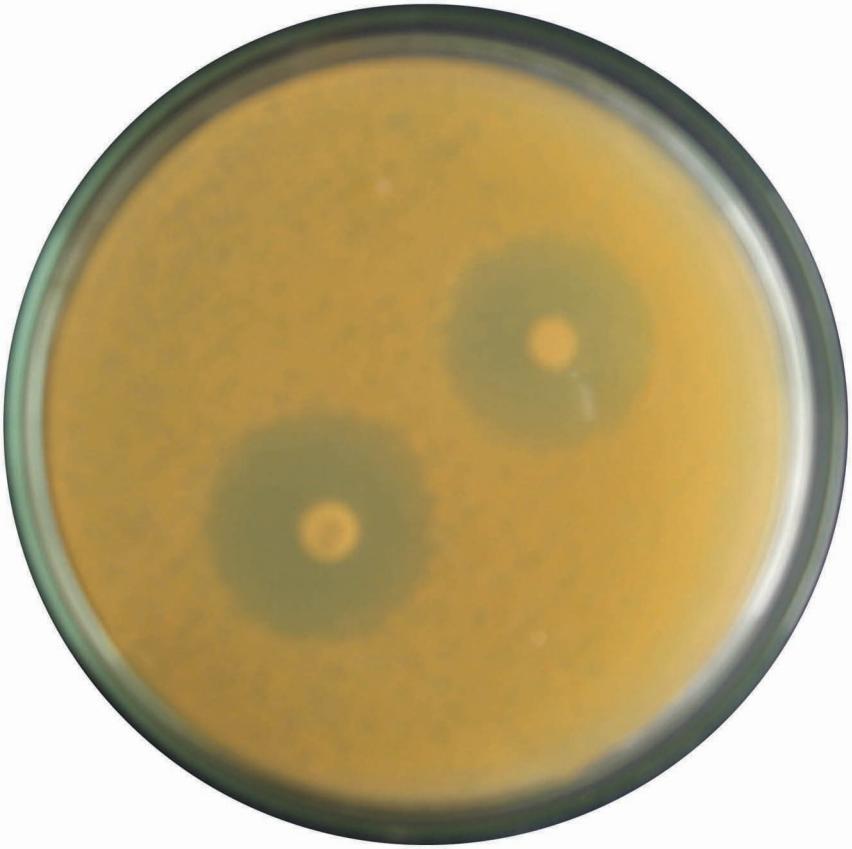
Pranayama

Dhanurasana

Vajrasana

Matsyasana

KAANDHA CHENDURAM



STAPHYLOCOCCUS

காந்த செந்தூரம்

VILLAIS

After 1st pudam

After 3rd pudam

After 5th pudam

After 7th pudam

After 10 th pudam

SYZYGIUM CUMINI

CITRUS MEDICA

ALOE VERA

FICUS RELIGIOSA

WEDELIA CHINENSIS

VELLALLIPOO CHOORANAM

STREPTOCOCCUS PNEUMONIAE

VELLALLIPOO CHOORANAM

STAPHYLOCOCCUS AUREUS

DRIED FLOWERS OF VELLALLIPOO

VELLALLIPOO CHOORANAM

NYMPHAEA ALBA